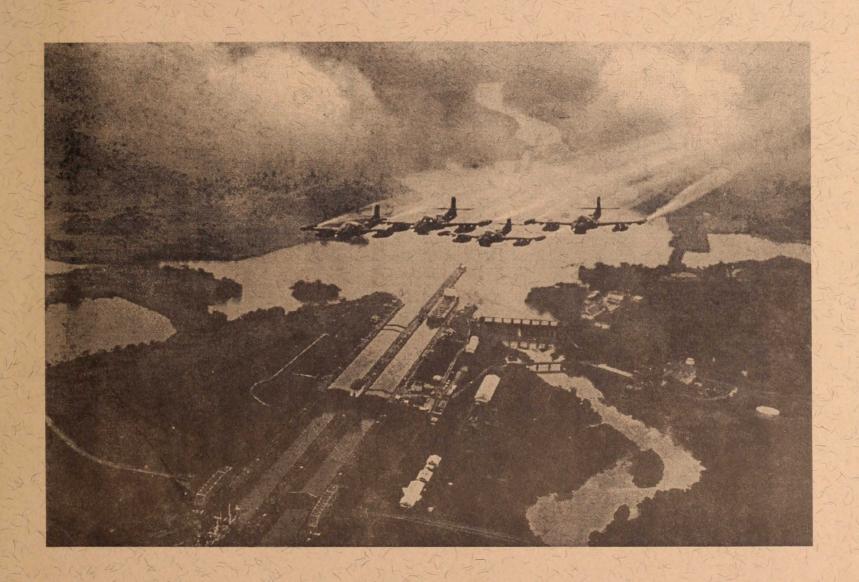
ANAMERICAN LEGACYIN PANAMA



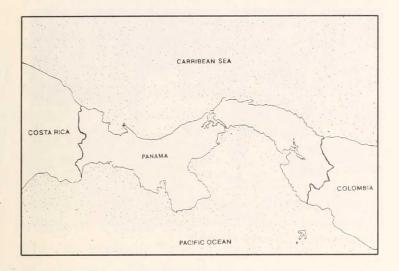
A Brief History of the Department Of Defense Installations and Properties

The Former Panama Canal Zone

Republic of Panama



An American Legacy



Researched and Compiled by:

Suzanne P. Johnson, Cultural Resources Specialist Consultant to Graves+Klein

Editor:

Richard M. Houle Chief, Engineering Division, Directorate of Engineering and Housing, USARSO

Technical Advice:

Ivan Klasovsky Chief, Plans and Property Branch, Directorate of Engineering and Housing, USARSO

Research/Design/Coordination:

Don Carlos/John Klein/James Mattern Architects Graves+Klein, Architects Engineers

Cover Photograph: "Four U.S. Air Force A-37s make a formation pass over the Miraflores Locks" U.S. Air Force Photograph, 5 December 1970.

This publication, a Legacy Resource Management Program demonstration project, was prepared for the United States Army South (USARSO) through the Directorate of Engineering and Housing, United States Army Garrison-Panama, by Graves+Klein, Architects, Engineers of Pensacola, Florida. The purpose of this brochure is to provide an overview of United States DoD installations in the Panama Canal Area. Future in-depth studies of individual DoD installations are under development.

Any information or additional sources of documentation would be greatly appreciated and should be forwarded to:

Suzanne P. Johnson,
Cultural Resources Specialist
or
Richard M. Houle
Chief, Engineering Division

HQ US Army Garrison - Panama Unit 7151, BOX 51 ATTN: SOCO-EH-E APO AA 34004-5000

Publication Information page 2

Contents

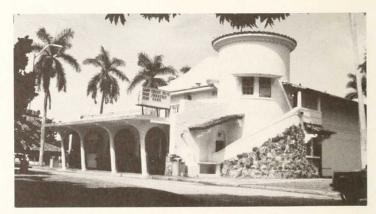
Introduction	4
The Stage Is Set	5
The Canal Construction Era	12
The Panama Canal Zone	19
Canal Defense	27
Pacific Division, East Bank Installations	31
Pacific Division, West Bank Installations	41
Atlantic Division Installations	49
Former Installations	58
U.S. Army Medical Activity	67
Department of Defense Dependents Schools	75



Monument at Quarry Heights

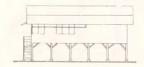


Barracks at Fort Clayton



Theater at Fort Clayton

Introduction



Since Columbus' 'discovery' of the New World, it was inevitable that the history of what is now called the Republic of Panama would be linked with that of other nations. The country's primary natural resource, a strip of land at places barely fifty miles wide, links the Western Hemisphere and separates the Atlantic and Pacific Oceans. The dream to cut this Isthmus and link the two oceans began over 350 years ago.

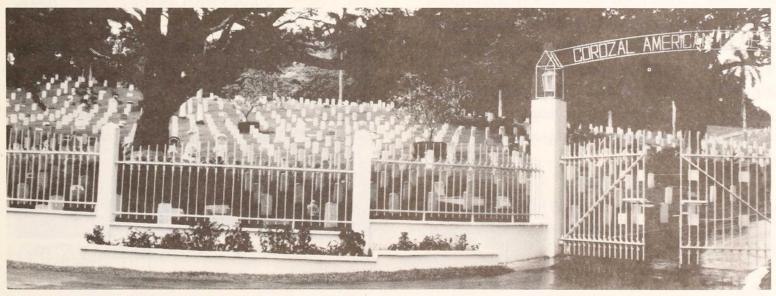
One of the first to recognize the commercial potential of a canal across the isthmus was the Spanish explorer Vasco Nuñez de Balboa, the 'discoverer' of the Pacific Ocean. After serious consideration, Spain's King Charles I rejected the proposal, concluding that "if God wanted the oceans to meet He would have built the canal Himself."

In the late 1880s, La Compagnie Universelle du Canal Interocéanique, a French company headed by Count Ferdinand de Lesseps, arrived on the Isthmus to begin construction of a canal.

Tropical disease and economic failure of the company led to the capitulation of the French, who sold the rights to construct a canal to the United States in 1903.

In the first decade of the 20th century, the United States, led by the U.S. Army Medical Corps and the Corps of Engineers, tamed the isthmus and completed the canal, the "Eighth Wonder of the World." Over the last 90 years, hundreds of thousands of U.S. citizens have been involved with the construction, operation, and defense of the canal.

By noon, December 31, 1999, control of the Panama Canal and its support and defense systems will revert to the Republic of Panama. Following final implementation of the Panama Canal Treaty of 1977, a unique American experience will have come to an end. The military bases, schools and hospitals located throughout the Canal area will remain as a physical legacy, a reminder of the United States' presence in Panama. There is a great need to properly document these installations. The majority of these installations are of historic and architectural significance, and represent a very unique era in the social history of both the United States and Panama.



Corozal American Cemetery

The Stage Is Set

FOREIGN CONQUEST

The history of the Republic of Panama is closely tied to its geography. As the link between North and South America, the Isthmus was fated to become a focal point of European exploration and a transportation corridor for goods from the New World. Indigeneous Indian tribes had established a passage trail across the Isthmus long before Colonial invaders established their own trade routes.

Spanish Exploration

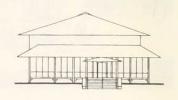
Spain, the first of the three major Colonial settlers, established Panama City in 1521 on the Pacific coast. It became one of the three richest cities in the New World. Goods from Central and South America were transported to Panama City by ship, and from there along the eighteenmile Las Cruces Trail to the town of Cruces, near the present town of Gamboa, and down the Rio Chagres. Along the route, part of which ran through what is now Fort Clayton, fortified outposts were constructed to provide protection to the Spanish mule trains carrying goods. On the Atlantic coast of the Isthmus, the city of Portobelo was established as a port for Spanish galleons which sailed once a year to the Mother Country with treasures plundered from the region.



Las Cruces Trail

English Piracy

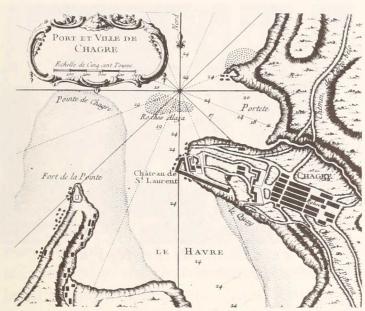
By 1572, England was silently watching the Spanish Empire grow rich at the expense of the New World. With the assistance of native Indians, who had been much abused by the Spanish, English pirates such as Sir Francis Drake, Captain Cook, and Henry Morgan raided not only the Spanish galleons as they set sail for Spain, but also the cities of Portobelo and Panama as well. Following a raid, they often hid out on Perico and Taboga Islands, Taboga "being that favorite anchorage of buccaneers."²



The Stage Is Set page 5

FOREIGN CONQUEST





Fort San Lorenzo

Spain reacted to the pirating by building fortifications including Fort San Lorenzo at the mouth of the Chagres River and Fort San Felipe at Portobelo. By 1746, due to continued raiding, the Spanish were forced to re-route their galleons around the tip of South America. The result was a temporary decline in interest in the Isthmus as a passage route.

In 1821, the Isthmus gained its independence from Spain and became a province of Nueva Granada (the Republic of Colombia).



Fort San Lorenzo today

The Panama Railroad



The Panama Railroad

The discovery of gold in California revived outside interest in using the Isthmus as a transportation corridor. In 1847, three New York entrepreneurs began construction of a second transportation system linking the Atlantic and Pacific Oceans, and on January 28, 1855, the Western Hemisphere's first transcontinental railroad was completed.

Although initiated by a United States mail contract, hundreds of would-be goldminers made the sea voyage from the east coast of the United States to the Atlantic port city of Colon where they rode the Panama Railroad to the Pacific port city of Panama. A second sea trek took them to their final destination-California. Surprisingly, this route was faster than crossing overland from the east to the west coast of the United States.

Once again, the Isthmus of Panama regained its place as the "crossroads of the Western world."³

FOREIGN CONQUEST



The French Era

The success of the Panama Railroad renewed international interest in constructing an isthmian canal. France, fresh from the success of the Suez Canal, bought the rights to construct the Panama Canal from Colombia in 1879.

In 1881, Ferdinand de Lesseps, builder of the Suez Canal, arrived in Panama intending to build a sea-level canal. After a preliminary survey, a canal route along the Rio Chagres and the Rio Grande was chosen. Under the direction of de Lesseps, the French began to clear jungles, excavate land and level mountains; however, economic corruption and rampant illness seriously undermined the project. Malaria and yellow fever took the lives of 22,000 laborers and engineers before the French finally admitted defeat in 1898.



Count Ferdinand de Lesseps and Friends at Cristobal

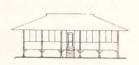


Remaining section of the French Canal



French cemetery, Paraiso

THE REPUBLIC OF PANAMA AND THE PANAMA CANAL TREATY



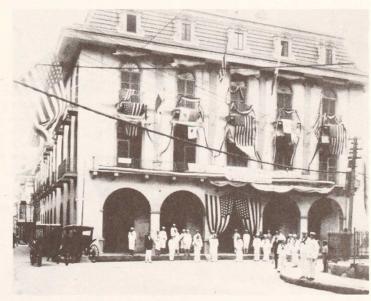
After attaining independence from Spain in 1821, Panama allied itself with the Republic of Colombia. Unsatisfied with the status of a 'Department' of Nueva Granada, political leaders of the Isthmus tried repeatedly (no less than 50 times between 1850 and 1902) to gain their independence and establish sovereignty.

In the late 1890s, the desire to improve commerce of the country and effectiveness of the military led to the United States' decision to build a transoceanic canal. After debating on the most economically sound route, it was determined that the Isthmus of Panama was the most practical location. Negotiations with the representatives of the failed French company were begun, and terms agreed upon. Colombia, hoping for more than the \$10,000,000 offered by the United States, commenced a ploy to hold out until 1904 when the French concession was due to expire, after which they would be able to demand more for the right to construct a canal at the Isthmus of Panama.

The U.S.'s determination to build the Canal, combined with Panama's need for military support in their quest for independence from Colombia, set the stage for a unique partnership between the two countries. On November 3, 1903, Panamanians revolted and proclaimed their independence from Colombia. The United States, acting in accordance with the terms of the 1846 Mallarino-Bidlack Treaty, which gave the U.S. "the right of way or transit across the Isthmus of Panama... free of all encumbrances

or restrictions whatsoever,"⁴ anchored naval warships at the Atlantic port city of Colon, with orders to "protect the Panama Railroad. Marines landed in Colon, and prevented Colombian troops from marching to the city of Panama, the headquarters of the Panamanian revolution."⁵ On November 6, 1903, the Republic of Panama was formally recognized by the United States.

On November 18, 1903, amidst controversy, the Isthmian Canal Convention (also referred to as the Hay-Bunau-Varilla Treaty) was signed. This agreement gave the U.S. the right "in perpetuity" to construct, maintain, and defend an interoceanic waterway across the Isthmus over which the U.S. would exercise rights, powers and authority "as if it were Sovereign of the territory." This document also granted to the United States



Pacific Squadron Visits Panama, 1909

THE REPUBLIC OF PANAMA AND THE PANAMA CANAL TREATY

the right to control the sanitation of the Panama Canal Zone and the two port cities of Panama and Colon. The French company received \$40,000,000 for its concession to build a transisthmian canal and for its properties on the Isthmus. The Republic of Panama received an initial payment of \$10,000,000, an annual payment of \$250,000 beginning in 1913, and a guarantee of independence.

The United States of America, represented by the Governor of the Panama Canal Zone, officially proclaimed occupation of the Isthmus of Panama on May 19, 1904. Lieutenant Mark Brooke, United States Army, "received the keys and formally took possession on behalf of the United States."



Panama City Today

RECENT HISTORY: THE PÁNAMA CANAL TREATIES OF 1977



Jimmy Carter and General Omar Torrijos signing the 1977 Treaty

Controversy over the conditions surrounding the signing of the 1903 Treaty resulted in continuous friction between the Panamanian and U.S. governments, and although there were numerous other conventions and treaties signed during the intervening years, the original treaty was not renegotiated until 1977.

While the Canal's importance to trade and rapid military transit between the East and West coasts of the United States remained vital, by the mid-1970s the probability of successfully defending the Canal against an enemy attack had decreased. The defense of the canal was deemed "hardly possible against either sabotage or missiles. It was decided that the best protection of the Canal was to assure Panama's own vital interest in preserving its greatest natural resource."

Increasing political pressure, growing Panamanian nationalism, and social unrest within Panama resulted in an agreement calling for the negotiation of a new treaty with a "fixed termination date."

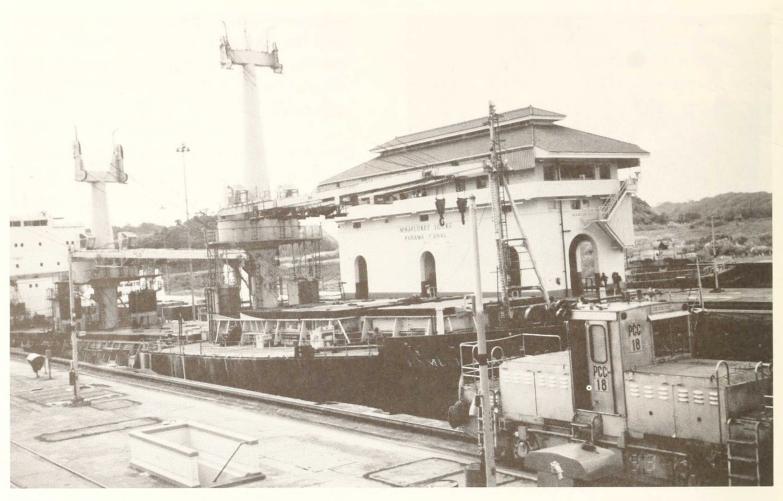
President Jimmy Carter, representing the United States of America, and General Omar Torrijos, representing the Republic of Panama, signed the Panama Canal Treaty and allied agreements on September 7, 1977. Those documents became effective on October 1, 1979, ('Treaty Day'), and govern the future operation and defense of the Panama Canal until final implementation at noon, December 31, 1999.

Under the Treaty of 1977, the Department of Defense retains control of certain installations, known as 'Defense Sites.' These are: Corozal, Albrook Air Force Station, Howard Air Force Base, Rodman Naval Station, the Cocoli housing community, Camp Semaphore, Forts Clayton and Kobbe at the Pacific end of the Canal, Galeta Island, and Forts Davis and Sherman at the Atlantic end.

The DoD maintains and controls other installations in Panama known as 'Military Areas of Coordination,' where authority is shared with the Panama National Police (PNP). These areas include: Quarry Heights, Fort Amador,

The Stage Is Set page 10

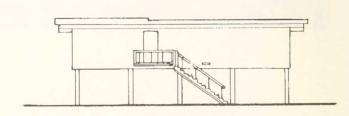
RECENT HISTORY: THE PANAMA CANAL TREATIES OF 1977



Cargo ship in Miraflores Locks

Gorgas Army Hospital, Curundu housing community, Naval Station Rodman-Fort Amador, Chiva Chiva, Summit Naval Radio Station and Empire Range on the Pacific side, and Fort Gulick on the Atlantic Side. Also included are most of the Department of Defense Dependents Schools (DoDDS).

On December 31, 1999, when the Panama Canal Treaty terminates, U.S. presence will cease and Panama will assume full control and responsibility for the operation, maintenance and defense of the Panama Canal. All DoD property will revert to the Government of Panama.



The Stage Is Set page 11

The Canal Construction Era

(1904-1914)

CHIEF ENGINEERS OF THE PANAMA CANAL

After officially claiming occupation of the Isthmus of Panama on May 19, 1904, the United States, in the form of the Isthmian Canal Commission, was able to count as its assets an odd assortment of French maps, surveys, drawings and more than 2,000 buildings, "all insect-infested and out of repair," in a country that was "a howling wilderness, pestilential and death-dealing." 10

The Isthmian Canal Commission, a Federal agency which reported directly to the Secretary of War and the President of the United States, was charged with the construction of the Panama Canal. The first Commission, which was appointed by President Roosevelt on February 29, 1904, arrived on the Isthmus in September of that year, and after a two week visit, left instructions for surveys to be initiated and "hurried back to Washington... duly impressed with the mighty responsibility resting on their collective shoulders."

John F. Wallace

The first to hold the title 'Chief Engineer of the Panama Canal' was John Finley Wallace. Mr. Wallace accepted the \$25,000 a year position, and arrived on the Isthmus in late June 1904. He was greeted by 746 laborers who had been half-heartedly continuing the work begun by the French at the Culebra Cut.

Wallace began his term by repairing the dilapidated housing left by the French and initiating surveys necessary for the engineering work to be accomplished. The citizens of the United States, however, "wanted something more than announcement of plans," 12 they wanted to see the **dirt fly**. Wallace's previous position as general manager of the Illinois Central Railroad prepared him for many of the challenges he faced, but not for the constant pressure to get on with canal construction, nor for the red tape from Washington.



John F. Wallace

In order to appease the public's demand, Wallace set the laborers to continue digging 'the big ditch,' although at the end of the day they had no option but to go home to a deserted railroad boxcar or a shanty in the jungle.



CHIEF ENGINEERS OF THE PANAMA CANAL

Wallace brought with him a "lurking dread that before he could finish the canal, the canal would finish him." He was terrified of the unhealthy tropical environment which had taken the lives of so many during the French construction era, and brought with him to the Isthmus two caskets - one for himself and one for his wife - 'just in case.' After serving as Chief Engineer for one year, Wallace succumbed to the pressure and complications emanating from Washington and his fear of contracting yellow fever or malaria. He resigned on June 28, 1905.

John F. Stevens

Following the resignation of Chief Engineer Wallace, the Isthmian Canal Commission was reorganized. It was required that the Chief Engineer and the Governor of the Panama Canal Zone, both members of the Commission, actually reside in Panama. The newly established board included several Army and Navy officers, whose appointments included orders to reside on the Isthmus.

On June 30, 1905, President Roosevelt named John F. Stevens as Wallace's successor. Upon arriving on the Isthmus on July 25, 1905, Stevens halted work on canal construction. He determined that construction of the canal could not be accomplished until three main issues had been dealt with.

The first issue was the sanitation of the Canal Zone. Until the area was healthy, thousands would die. Although not entirely convinced of the Chief Sanitary Officer's (Dr. Gorgas) scientific findings, Stevens whole-heartedly supported his sanitary efforts.

The second issue was the preparation of the organizational groundwork. Construction of facilities to accommodate the vast number of laborers and engineers expected on the Isthmus was begun. Commissaries and dining facilities, recreation and religious facilities, piers, machine shops, police stations, jails, a cold storage plant, schools, fire stations, bakeries, laundries, hotels, mess halls, harbor installations, housing, and a sewage disposal plant were constructed. A telephone system was laid out, and repairs were made to the old French hospital. The railway system, which had fallen into disrepair, was rehabilitated for transporting the large amount of



John F. Stevens

CHIEF ENGINEERS OF THE PANAMA CANAL

waste and spoil from the Culebra Cut and other areas. Having provided a substantial and healthy infrastructure, Stevens redirected his efforts to the construction of the canal itself.

It had still not been determined which type of canal - sea-level or lake-and-locks - would be constructed. In June of 1905, a panel of thirteen engineers was appointed by President Roosevelt to study and recommend the type of canal to be built. Chief Engineer Stevens, based on his evaluation of the construction site, submitted a report favoring a lock-type canal, but the determining panel recommended a sea-level type. Despite the advice of the panel, Congress and the President officially endorsed a lake-and-locks-type canal. The third major issue had been resolved.

Despite his success in laying the necessary groundwork for canal construction, Stevens, like Wallace, was continually frustrated by Washington, and on March 31, 1907, he resigned.

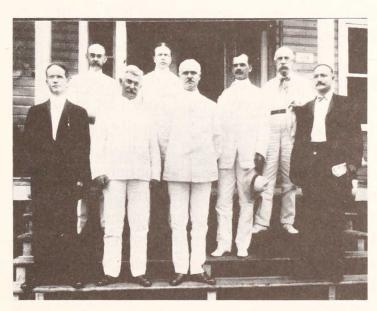
George W. Goethals

Following the resignations of his first two Chief Engineers, Roosevelt decided that "henceforward the work should be done by army and navy officers, trained to go where the work was to be done and to stay there until recalled... The government [would] be the sole contractor, the only employer, the exclusive paymaster, landlord and purveyor of all that was needful on



Chief Engineer Goethals in front of the Miraflores Spillway

the Zone. In short he had planned for the Canal Zone a form of administration which came to be called socialistic and gave cold chills to those who stand in dread of that doctrine."¹⁴



Colonel George Washington Goethals and the [Third] Isthmian Canal Commission Board Members

CHIEF ENGINEERS OF THE PANAMA CANAL

Roosevelt appointed Lieutenant Colonel George Washington Goethals, U.S. Army Corps of Engineers, to the position of Chairman of the Isthmian Canal Commission, thereby moving control of the Commission from Washington to the Isthmus. Goethals was also appointed Chief

Engineer of the Panama Canal and President of the Panama Railroad. Never had this much authority been vested in a single person on a project the size of the construction of the Panama Canal. In a single day, Goethals became "the supreme ar-

Goethals Memorial Celebration

biter of the destinies of all men and things on the Canal Zone thereby earning him the title of Benevolent Despot."¹⁵

Reaction on the Isthmus to the announcement that the U.S. Army would construct the canal was anything but positive. Shortly after his arrival on March 14, 1907, Goethals eased the minds of his work force when he announced that he would be leading "the Army of Panama, whose enemies were Culebra Cut and the canal's locks and dams. The division engineers already in charge were to be his colonels, the foremen his captains, the men who dug his private sol-

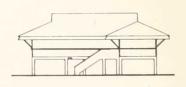
diers."¹⁶ Together they would defeat the enemy and build the Panama Canal.

Following the completion of the Panama Canal, the office of Chief Engineer was eliminated, and Goethals was appointed Governor of the Panama

Canal Zone, a post he held until 1916 when he resigned from the Army to establish a private engineering practice. His plans were thwarted, however, by the U.S.'s entry into World War I. In 1917, Goethals was reinstated into active duty,

serving as acting quartermaster-general of the U.S. Army. He was awarded the Distinguished Service Medal and received honors from Great Britain, France and China as well.

Major General George Washington Goethals died in New York on January 21, 1928. Flags in the Panama Canal Zone flew at half staff until after his interment at West Point. On March 31, 1954, dedication ceremonies were held for the unveiling of the monument erected in his honor at the foot of the Panama Canal Administration Building in Balboa.

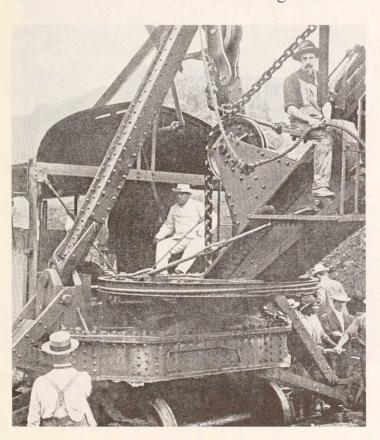


OTHER KEY PERSONNEL



President Theodore Roosevelt

Although three United States presidents were actually involved with the acquisition, construction and opening of the Panama Canal, it is President Roosevelt who is most often recognized for his association with what he called 'the big ditch.' Roosevelt was the first to travel outside of the United States while serving as President, and it should be no surprise that he left the U.S. to visit the Panama Canal Zone and to judge for himself the progress of the canal. On November 14, 1906, Roosevelt, his wife, and a small party arrived on the Isthmus. Having sailed on the U.S.S. Louisiana, Roosevelt met with the leader of the Republic of Panama, President Manuel Amador, spoke publicly from Cathedral Plaza in Panama City, and inspected various canal construction sites before returning to the U.S.



William C. Gorgas



Doctor William C. Gorgas

Sanitary conditions on the Isthmus in 1904 were extremely poor. Panama was, in fact, considered to be "the unhealthiest place in the tropics." From the onset of U.S. occupation, President Roosevelt was concerned about the health of Americans in the tropical climate. A position was created as early as May 19, 1904, for a Chief Sanitary Officer of the Canal Zone. The first to hold this position was an "experienced officer of the naval medical service," L.W. Spratling, who was succeeded shortly after by Doctor William Crawford Gorgas, a personal appointee of President Roosevelt.

President Theodore Roosevelt inspecting the Canal works

OTHER KEY PERSONNEL

Based on his experiences in Cuba during the Spanish-American War, Dr. Gorgas knew precisely how to combat malaria and yellow fever. During his first year on the Isthmus, however, he was prevented from implementing proper procedures by those in authority who felt that "the whole idea of mosquitoes carrying fever is the veriest balderdash."¹⁹

With the support of Chief Engineer Stevens, Gorgas was able to begin a campaign to screen windows, clean up and pave streets, clear brush, fill in swampy areas and remove free-standing water. By January of 1906, yellow fever was nearly eliminated from the Isthmus, and within the next few years, malaria was also upder con-

trol. Dr. Gorgas's recognition of the causes of major diseases in Panama would have a profound effect on the design requirements for the facilities constructed there.

Brigadier General Gorgas was named Surgeon-General of the United States Army in 1914, and on March 4, 1915, in recognition for his services in connection with the sanitation of the Panama Canal Zone, he was promoted to the rank of Major General in the Medical Department of the United States Army.



Tourists in the Culebra Cut

THE PANAMA CANAL

Former British Ambassador James Bryce perhaps best described the construction of Panama Canal when he stated that it was "the greatest liberty Man has ever taken with Nature." By the time it was completed, the Panama Canal had involved the construction of the largest manmade earth dam - Gatun Dam; the largest manmade lake - Gatun Lake; the largest excavation in history - Culebra (Gaillard) Cut; and the construction of the largest locks - Miraflores, Pedro Miguel and Gatun - in the world.

A total of \$387,000,000 was spent by the United States on the Panama Canal. The cost for the construction itself was \$310,000,000, with \$10,000,000 paid to the Republic of Panama, \$40,000,000 to the French company, and \$20,000,000 for the sanitation of the Isthmus.



The U.S.S. Arizona transits the Canal, February 23, 1921

The Panama Canal Zone

EARLY CONSTRUCTION



By 1906 the design department of the Isthmian Canal Commission (ICC) had prepared plans for seventeen housing types, all

of which were based upon "the isthmian climate, the material available, [and] the character of the building sites, with the necessary restrictions imposed by the sanitary department, and the official status of the employees." ²¹



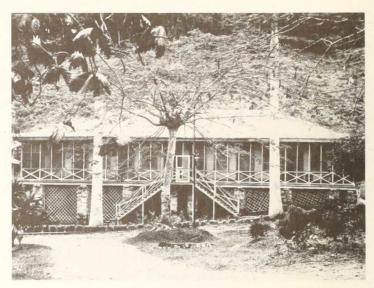
Early temporary housing types (intended to last only for the duration of the Canal construction era) mimicked the earlier French prototypes. Structures

were raised above the ground on stone or concrete foundations, which offered some protection from termites and moisture and allowed air to circulate around the structure. Copperscreened verandas offered protection from mosquitoes, the carriers of yellow fever, and created exterior living spaces which captured available breezes.



The wood frame structures typically had steep roofs of corrugated metal and were clad with painted wood siding on both the interior and exterior sur-

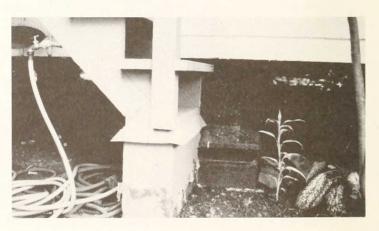
faces. Many of these early wood frame buildings are still in use today in Panama.



French housing, Ancon



Screened veranda at Quarry Heights



Raised structure with metal flashing serving as termite shield

The Panama Canal Zone page 19

PERMANENT COMMUNITIES



Residential community at Fort Clayton

The ICC designers soon learned how quickly the harsh conditions in Panama could destroy these early wooden structures, and during the final years of Canal construction the Isthmian Canal Commission turned its attention to designing and building permanent communities.

Funds were appropriated by Congress to the Canal Commission for the construction of barracks, family housing, administration buildings, and support facilities for the U.S. Army and Navy throughout the Isthmus of Panama. A Board of Officers was appointed to determine the types of quarters and other buildings to be erected.

Design guidelines were established for both permanent communities and military installations. Based on the need for durability and economy, as well as sanitary regulations issued by Dr. Gorgas, buildings were to be of reinforced concrete with clay tile roofs. They were to be 'rat-

proof' to prevent the possibility of a plague outbreak and 'mosquito-proof' to combat the ever present mosquitoes. The resulting uniform building type is easily identifiable throughout the Canal area. These early permanent facili-



Tile hood and 'Media Agua'

The Panama Canal Zone page 20

PERMANENT COMMUNITIES

ties continued the history of open-air designs started by the French including: generous screened porches, an abundance of windows, and a classical design influence.



Chief Engineer Goethals was determined that the permanent towns and military installations would be communities

where the residents would be proud to live. When presenting his estimates on the cost of constructing the new town of Balboa to members of Congress in 1913, Goethals justified his request by stating: "I want to make a town there that will be a credit to the United States government."²²



In keeping with this idea, the permanent facilities were more apt to incorporate rich details, such as the bronze and marble entry and lobby

of Building 519, Fort Clayton.

Over the last four decades, many of the early buildings have been radically modified. Porches have been enclosed to increase useable floor area and reflect the introduction of air conditioning.



The modifications, usually easily identifiable, are typically at odds with the open-air environment envisioned in the original designs.



Oversized bronze doors to building #519, Ft. Clayton

To complement the architectural staff, Mr. Otis W. Barrett, a landscape architect, was brought to the Isthmus to supervise the beautification of the new communities. Mr. Barrett pointed out that "no place in the world offers better opportunities for this purpose, as the climate of perennial summer allows plants a continuous development to more and more attractive forms." ²³

PERMANENT COMMUNITIES



Panama's tropical climate and abundant rainfall allows for an unusually large variety of tropical and subtropical plants. Exotic

species from Africa, Asia, and Europe have been colonized in Panama. Mahogany, Rubber trees, African Tulip trees, Royal Palms, Banana trees, Banyans, Flame trees, Mangoes, and Norfolk Island Pines are just a few of the major plants used for landscaping.

In order to relieve the concrete communities of their "glistering new ness"²⁴ and to "conceal [their] angularity,"²⁵ ornamental plants, trees and shrubs were made available to residents free of charge. Decorative incandescent streetlights,



Typical residential street with original lamp post

specially ordered from the United States, provided security lighting as well as a lovely detail along the palm-lined streets.



Landscaping at Fort Amador



Two 'Cabaret Girls' at the Fort Amador Beach Club

The Panama Canal Zone, as designated by an act of Congress on April 28, 1914, was a strip of land "and land under water" five miles wide on either side of the canal. In 1928, President Calvin Coolidge referred to the Panama Canal Zone as "one of our outlying possessions."27 While inaccurate, the statement was one perceived by citizens of the U.S. to be correct. Those who lived within the Zone lived with the same basic rights as any other U.S. citizen living in the United States. The Canal Zone was not, however, a democracy. There were no elections, and hence, no elected officials. The government within the Canal Zone was administered by the Canal Zone Government, in the form of the Department of Civil Administration.

For 'Zonians' (U.S. citizens living within the Canal Zone), the Canal Zone was "a great government reservation," inclusion into which was restricted. Only those connected with the administration, operation, maintenance or defense of the Canal were allowed to live within the Canal Zone. At the highest echelon of the Canal Zone hierarchy were the Commissioners, the commanding officers of the military installations, and their families.

Housing was provided for all persons employed by the U.S. Government, and electricity and other utilities were available either free of charge or at very low rates, rates compatible to "what it cost to produce them. If at the end of the year the balance-sheet show[ed] a profit, the cost of the current [was] reduced."²⁹

The Panama Canal Zone page 23



Boy Scouts of America Local Headquaters

Private ownership of land within the Panama Canal Zone was prohibited, and while housing was provided, square footage was based on one's ranking within the Canal Zone hierarchy. During the early Canal construction era, "white Americans lived in airy wooden structures with screened verandas; unmarried European and black laborers had to be content with unscreened mass quarters; black families could choose between American-built barracks (also unscreened and crowded) or shacks of their own in derelict native villages.

Housing conditions thus became a mirror image of the social order on the Isthmus. As a contemporary observer put it: 'Caste lines are as sharply drawn as in India. Every rank and shade of man has a different salary, and exactly in accordance with that salary is he housed, furnished and treated down to the last item.'"30 While housing conditions for non-white employees improved during Chief Engineer Goethals's administration, segregation remained the order of the day.



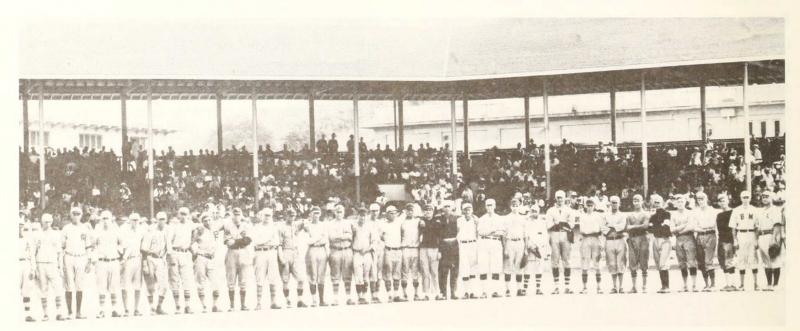
The Panama Canal Zone page 2

Commissaries provided foodstuffs, with prices usually compatible with, but sometimes lower than, those in the United States. While many items were brought to the Zone from the U.S., plantations and farms within the Zone provided fresh fruits, vegetables, beef, poultry and pork. "The plan of eventually making the Canal Zone independent of outside sources for its food supply [was] developed and arrangements [were] perfected so that [The Panama Canal] would be able to support ourselves in case we should for any reason be cut off from all outside food supplies." ³¹

Recreational opportunities were also provided. Gymnasiums, swimming pools, golf greens, tennis and volleyball courts, and baseball fields were located throughout the Zone in various communities. Athletic competitions, such as baseball tournaments and boxing matches, were encouraged.



Deep sea fishing - Pacific Ocean



Baseball teams of the Panama Canal Zone

Government owned and operated clubhouses, where one had access to "reading rooms, writing rooms, pool and billiard tables, bowling alleys, moving pictures, free telephone service, barber shops, beauty parlors, lunch and soft drink rooms and places for dancing," were also erected in most of the permanent communities. For a special 'get-away' weekend, the Hotel Aspinwall, located on the off-shore island of Taboga, was available. Medical facilities, police and fire stations, churches, post offices and schools were also located in nearly all Zone and military communities.



Former Canal Zone Y.M.C.A.



The Annual 'Ocean to Ocean' Cayuca Race, sponsored by the Explorer Scouts

The Panama Canal Zone page 2

Canal Defense



Guns guarding Canal entrance

During the construction phase the question of whether or not the Canal should be fortified was debated by the American public, Congress, and the world at large.

It was decided that the monetary investment, and the ability of military ships to quickly pass from the Pacific to the Atlantic, be defended. To that end, by August 1, 1914, an additional \$12,050,825 had been appropriated and spent on fortifications for the Panama Canal.

The Treaty to Facilitate the Construction of a Ship Canal (more commonly referred to as the Hay-Pauncefote Treaty) established that "the canal shall never be blockaded, nor shall any right of war be exercised nor any act of hostility be committed within it." Ships of all nations

were to have equal access to the canal, during both war and peacetime, and in order to guarantee equal access, the United States was "at liberty to maintain such military police along the canal as may be necessary to protect it against lawlessness and disorder."

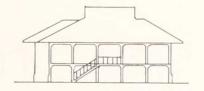
The end of the Canal Construction Era coincided with the development of political uncertainty in Europe, thereby transforming the role of the military in the Canal Zone from one whose duty it was to maintain law and order to one whose duty it was to defend the Canal against any threat of attack.

Construction of battery fortifications at Forts Sherman and Randolph at the Atlantic entrance, and Forts Grant and Amador at the Pacific entrance, were begun as early as 1913, under the direction of the Isthmian Canal Commission. Additional batteries were constructed in the late 1920s to aid in coastal defense.

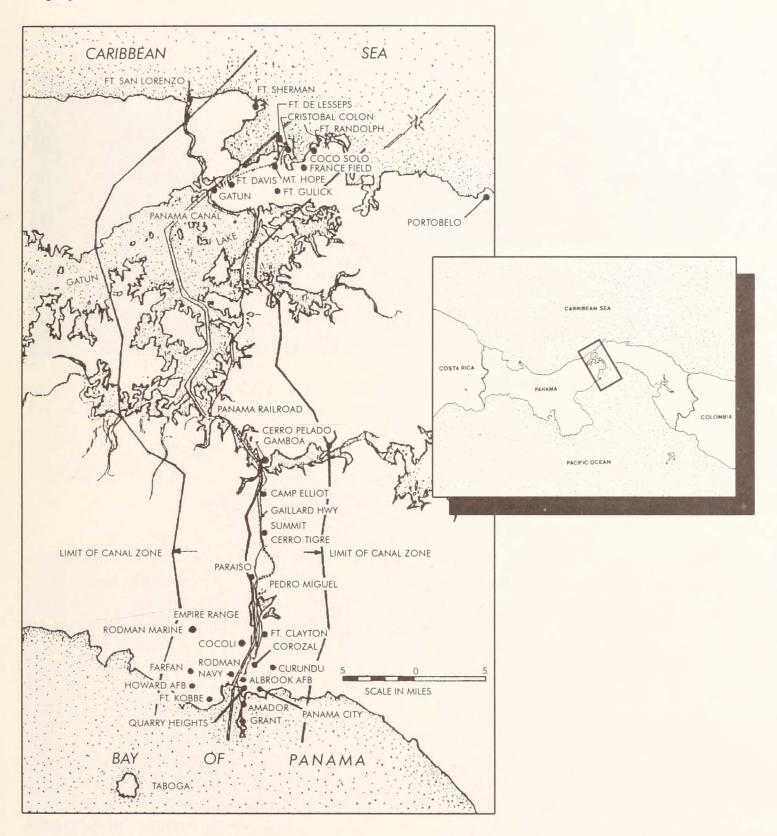
When the Panama Canal opened in 1914, the "Panama Canal Guard Force" (the term used to identify military troops in the Canal Zone) included a Marine Battalion, an Army Infantry Regiment and three companies of Coast Artillery stationed in the Canal Zone. In all they averaged a personnel strength of 797. By June of 1915, that force had been increased by two additional Infantry regiments, a company of Engineers, a company of Signal Corps, an ambulance company, four more companies of Coast Artillery, and a detachment of the Hospital

Canal Defense page 27

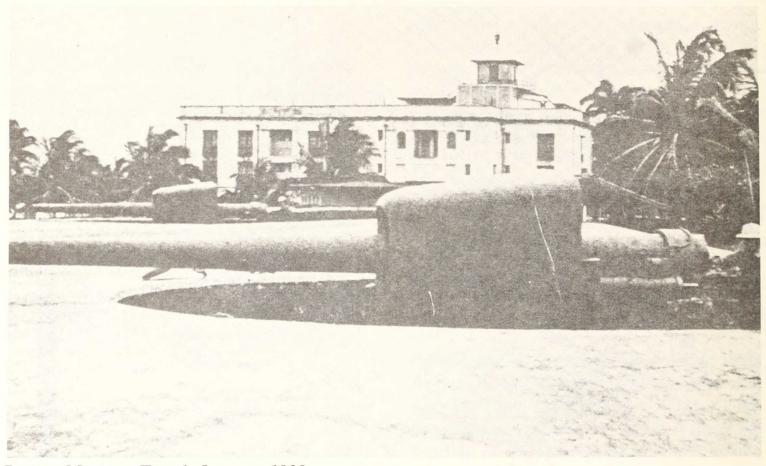
CANAL DEFENSE



Map of the Panama Canal Zone



CANAL DEFENSE



Battery Morgan, Fort de Lesseps, 1939

Corps, with a total strength of 6,248. Accompanying the troops were their family members, including 373 women and children.

The majority of these troops were located on the west bank of the canal, in the former Isthmian Canal Commission construction towns of Culebra, Empire, and Las Cascadas. Since they were not needed by the ICC, they were turned over to the military.

Naval forces were also stationed on both sides of the Isthmus. On the Atlantic side, the Coco

Solo Submarine Base was established; on the Pacific side, at the request of the Secretary of the Navy, part of the Fort Grant-Fort Amador Harbor Defense Installation was set aside for naval use.

In 1917, local and stateside military authorities insisted that certain areas be officially set aside by Executive orders as military reservations, under the authority of post commanders. It was determined that during wartime, or if ever it were determined, in the opinion of the President, that war were imminent, the President of the United

Canal Defense page 29

CANAL DEFENSE

States had the authority to appoint an Army officer to "assume and have exclusive authority and jurisdiction over the operation of the Panama Canal and all its adjuncts, appendants and appurtenances, including the entire control and government of the Panama Canal..." During peacetime, however, the Governor of the Canal Zone had final jurisdiction over the Panama Canal Zone, including U.S. military reservations.

Headquarters for the U.S. Army was initially located in what would eventually become the Panama Canal Company's District Court Building in Ancon. After a short stay, the Command made plans to move - again temporarily - to a site on Ancon Hill where rock had been quarried during Canal construction. Quarry Heights was not planned as a permanent site, as it was



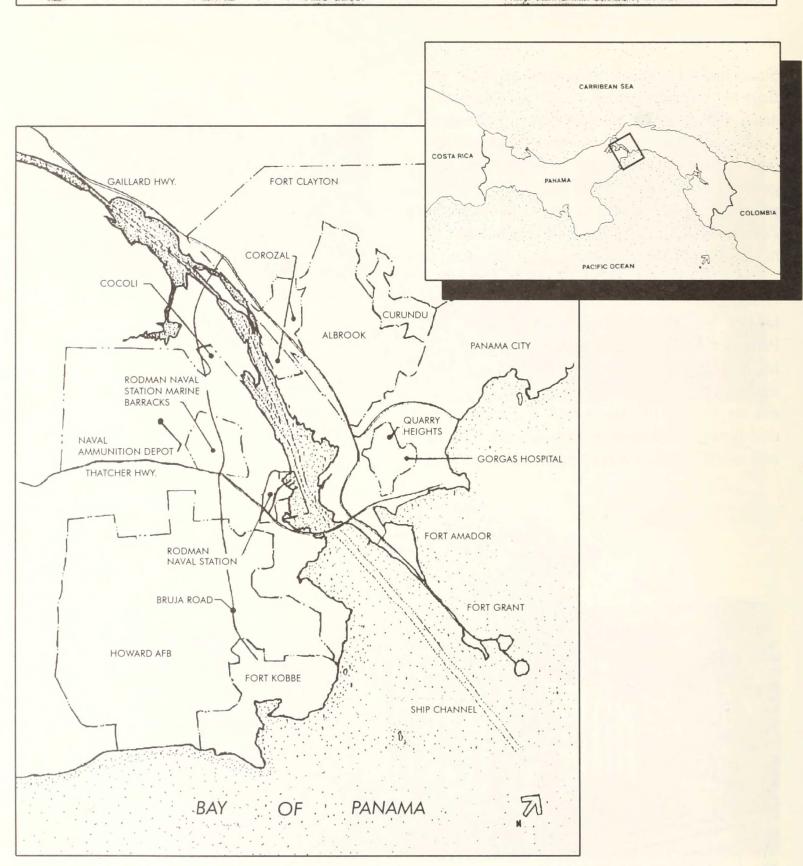
Newly sited Housing

thought that the area was not large enough for a permanent headquarters. Instead of building permanent facilities, temporary wood structures were relocated from other Canal Construction Era communities.



Moving buildings by Flatcar

Pacific Division



Pacific Ocean

Pacific Division

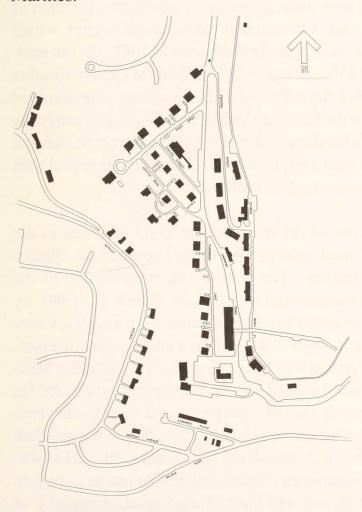
EAST BANK INSTALLATIONS

Quarry Heights



The first military troops to arrive on the Isthmus of Panama were the United States Marines, 1,400 of whom "were landed during the insurrections of November 1903. This contingent

of troops was detailed to keep the Panama Rail-road open to traffic and protect U.S. Government property."³⁴ A reservation was established on a man-made terrace on the western side of Ancon Hill, adjacent to the Panama Canal Zone capitol city of Balboa, to accommodate the Marines.



Quarry Heights



Wood frame building at Quarry Heights

Plans for the layout of the Quarry Heights Military Reservation were determined by naval authorities, and included several 150-men barracks, officers' quarters, administrative buildings and a parade field.

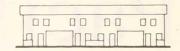
Following the transfer of the Marine detachment on February 21, 1914, to take part in the uprising in Mexico, Quarry Heights was designated temporary headquarters of the military forces in the Canal Zone. This site was most suitable,



Quarry Heights from Hydrographer's Tower

Pacific Division page 32

EAST BANK INSTALLATIONS





Ancon Quarry

it was felt, because of its proximity to the Panama Canal Commission headquarters in Balboa.

Formally established on December 22, 1919, Quarry Heights Reservation took its name from the rock quarry on the side of Ancon Hill, stone from which was used in the construction of the Miraflores and Pedro Miguel Locks.

As the need arose for housing military personnel and their families at Quarry Heights, old Isthmian Canal Commission houses were dismantled and re-erected at Quarry Heights. One of the first such buildings to be moved to Quarry



Interior of Officer's Quarters



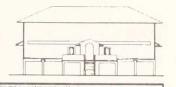
Residential quarters at Quarry Heights

Heights was Quarters #1, the now official residence of the Commander in Chief.

There were, at one time, nearly two hundred of these 'construction camp' wood houses, which were originally built around 1906. In the mid-1930s, however, all but those at Quarry Heights and the official residence of the Administrator of the Panama Canal Commission (formerly the official residence of the Governor of the Panama Canal Zone) were demolished and replaced with more modern buildings.

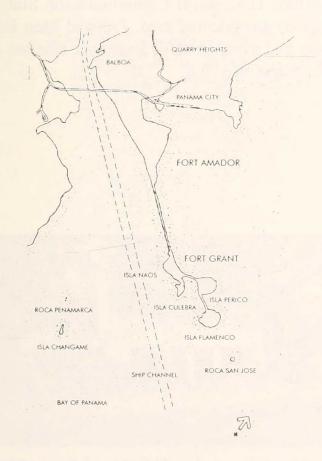
One of the most unique DoD facilities in the Canal area is the tunnel located at Quarry Heights. The plan for the construction of the structure was initiated on March 27, 1940, by Lieutenant General Daniel Van Voorhis, Commanding General of the Panama Canal Department at that time. General Van Voorhis justified the need for the bombproof structure, "for use in case of emergency and vital to the security of important data." The Command Post facility, completed by January 20, 1942, was constructed "under 200-feet of native porphyry rock and was built of reinforced concrete" at a cost of \$400,000.

EAST BANK INSTALLATIONS



Fort Amador/Fort Grant

Located on the east bank of the Panama Canal on the Bay of Panama, Fort Amador and Fort Grant were among the first of the permanent Panama Canal fortifications to be planned and constructed. Fort Grant, which was named in honor of General Ulysses S. Grant (United States Army, and President of the United States from 1869 to 1877), consisted of the causeway breakwater, the connected islands of Naos, Culebra, Perico and Flamenco, and the off-shore islands of San Jose, Panamarca, Changarmi, Tortolita, Torola, Covoviceta, Cocovi, Taboga and



Fort Amador/Fort Grant

Venado in the Bay of Panama. On each of the four connected islands were constructed batteries, whose guns guarded the Pacific entrance to the Panama Canal.

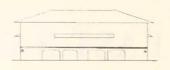
Fort Amador, named in honor of Dr. Manuel Amador Guerrero (President of the Republic of Panama from 1904 to 1908), consisted of housing, administrative facilities and support facilities for the Coast Artillery troops associated with Fort Grant as well as their family members. Over time, the causeway islands ceased being referred to as Fort Grant.

Fort Amador was originally an area of coastal swampland and mangrove stands. In-fill was begun around 1908 using material removed from the Culebra (Gaillard) Cut during its construction. Construction of the breakwater, including the connection of Naos, Culebra, Perico and Flamenco Islands, was completed in September of



Palm-lined street of Command Staff Quarters with Band Stand at foreground

EAST BANK INSTALLATIONS



1914. More than 2,141,536 cubic yards of waste were deposited during the breakwater project.

Headquarters for the U.S. Army forces in the Panama Canal area were located at Fort Amador until "Treaty Day," October 1, 1979, when all of the causeway islands and parts of Fort Amador reverted to the Republic of Panama in compliance with the Panama Canal Treaty of 1977. At that time the remainder of Fort Amador, which consisted of family housing and community services activities, became a Military Area of Coordination. Army headquarters moved from Building #1, Fort Amador, to Building #95, Fort Clayton.

U.S. Naval Station -Fort Amador

One of the earliest naval installations set aside in the Canal area was the Balboa Naval Radio Station. Established around 1914, the land for the installation was separated from Fort Amador "for the exclusive use of the Navy."³⁷ The name of the naval station was changed shortly after to the Fifteenth Naval District Headquarters.

In later years, the Fifteenth Naval District Headquarters included the "U.S. Naval Forces Southern Command/Fifteenth Naval District Headquarters, U.S. Naval Communication Station Balboa, a residential area, Enlisted Men Barracks and a branch Navy Exchange situated on a 65.5 acre site."³⁸

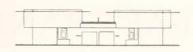


Headquarters, U.S. Naval Station Fort Amador



Residential quarters, U.S. Naval Station Fort Amador

Pacific Division page 35

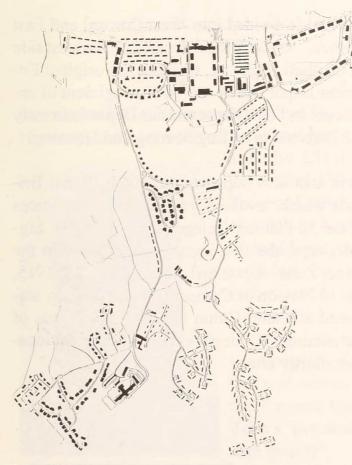


Fort Clayton



Fort Clayton opened in 1922, and was named in honor of Colonel Bertram T. Clayton (Quartermaster Corps, U.S. Army), who was killed in action in Europe on May 30, 1918. Located directly across

from Miraflores Locks, Fort Clayton was constructed to accommodate one regiment of Infantry on in-filled land called the 'Miraflores dumps.'



Fort Clayton

Funds were allocated on April 23, 1919, to The Panama Canal for the construction of Fort Clayton. Construction of the post, which originally included a headquarters building, battalion barracks buildings and family housing (Quarters #1 through #26 and Quarters #800 and #801), was completed by July 1, 1920.



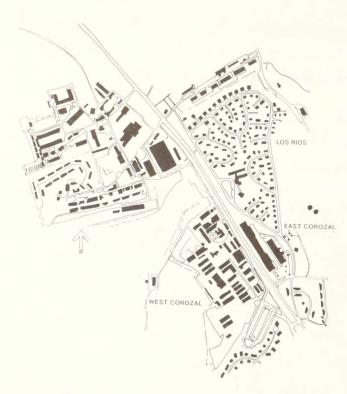
Residential quarters at Fort Clayton

In 1926, Fort Clayton was 'home' to the Pacific Motor Transport Pool and two Motor Transport companies. The post also sponsored a polo team.

During World War II, Fort Clayton served as the headquarters for the Panama Mobile force and the Security Command. The installation became headquarters for the Army component of the Southern Command on 'Treaty Day.'

The miniature replica of the Statue of Liberty which welcomes visitors and residents of Fort Clayton to Jarmin Field was a gift to the Panama Canal Zone Boy Scout Council, made on behalf of scouting enthusiast Morris Hoffman in May of 1951. The original Statue of Liberty was presented by Ferdinand de Lesseps to the American ambassador to Paris on May 21, 1884, during the height of the French canal construction effort.

The industrial sub-area of Corozal and the civilian housing area of Curundu became parts of Fort Clayton by amendments to the original orders in 1942, 1954 and 1955.



Corozal and the Panama Canal Town of Los Rios

Corozal





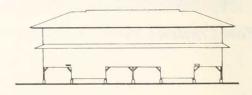
A sub-installation of Fort Clayton, the Post of Corozal was named for the

Corozo grove which grew in the area. A Corozo is variety of palm tree which produces a small, oily fruit.

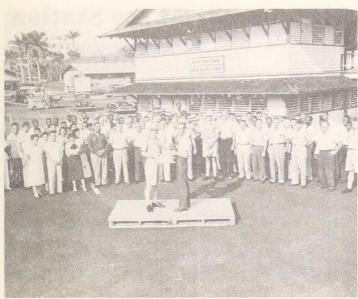
Towards the end of the Canal construction era, the Isthmian Canal Commission abandoned most of the Corozal settlement and turned over the use of its buildings to the Army.

Corozal is divided into West Corozal and East Corozal. West Corozal, located on the west side of Gaillard Highway, includes the original Engineer Depot which served one regiment of engineers and the Quartermaster Depot (currently the Directorate of Engineering and Housing).

This area also supports the 106th Signal Brigade which "evolved from the crude resources of the 3d Platoon, Telegraph Company H, Signal Corps, the first signal unit to serve in the Canal Zone. Upon arrival on March 25, 1915, the 3d Platoon of Company H was initially stationed at Camp Gatun on the Atlantic side of the isthmus," but relocated to its current location shortly after.



page 37



Engineering Compound, 1952

East Corozal, located on the east side of Gaillard Highway, includes enlisted personnel barracks



Former stable entry door

and the Civilian Personnel Office Training Center, all of which are housed in buildings constructed by the Isthmian Canal Commission and Panama Canal Commission. East Corozal served as the Panama Canal Zone's "psychiatric care facility".

Curundu

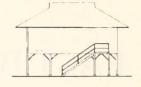
The Corundu Military Reservation was established December 30, 1919, although it was not officially named until May 21, 1934. The spelling of 'Corundu' was later changed to 'Curundu.'

The original reservation consisted of Fort Clayton, the Panama Ordnance Depot (formerly the Panama Arsenal), the Engineer Depot, the Post of Corozal, Paraiso Camp and Albrook Field. The Panama Ordnance Depot had been previously established in 1916. With the creation of the Curundu Military Reservation, the Ordnance Depot fell under its domain.

Albrook Field was separated from the Curundu Military Reservation and established as a separate installation in 1924. Camp Paraiso, a subpost of Curundu Military Reservation, was located near the Panama Canal Company town of Pedro Miguel.



Former bachelor housing at Curundu



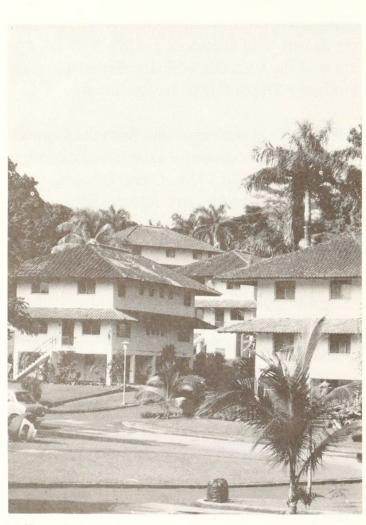
More recently, the Curundu Army Reservation, which at one time included a total of 779.20 acres, consisted of family and bachelor housing and command and community support facilities. Most of Curundu reverted to the Republic of Panama in 1982.

Albrook Air Force Station

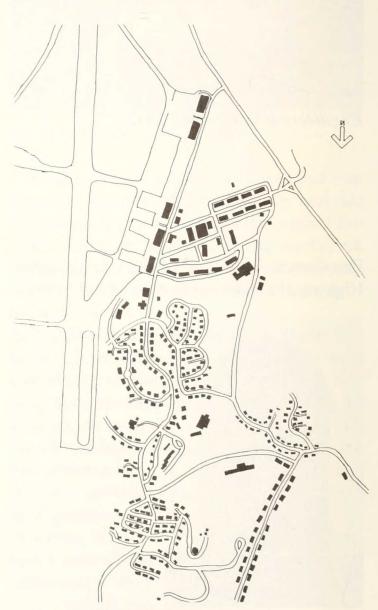


Albrook Air Force Station, originally called the Balboa Fill Landing Field, was separated from the Curundu Military Reservation and

formally established as an independent installation in 1924. It was the first installation on the



Albrook housing



Albrook Air Force Station



Hangars, Albrook Field, C.Z.

Pacific side of the Isthmus to be reserved specifically as an airfield. A runway had already been constructed for the Army at France Field on the Atlantic side of the Isthmus, but it was felt that there was a need for a second runway for "air protection in the Pacific sector."

Balboa Field was renamed in honor of First Lieutenant Frank P. Albrook (Air Service, U.S. Army), who on March 16, 1921, was assigned to the 7th Observation Squadron (under the command of Captain Henry H. 'Hap' Arnold) at France Field. Lieutenant Albrook was responsible for activating and assuming command of the 8th Air Park at the Balboa Fill Landing Field before his untimely death on September 17, 1924, from injuries received in an airplane accident at Chanute Field, Illinois.

Construction of administrative and support facilities and barracks and family housing units at Albrook was begun shortly after the completion of the landing fields.

With the transition from the Army Air Corps to the United States Air Force, the field became Albrook Air Force Base.



View down residential street, Albrook Field, C.Z.

Pacific Division

Contract of the second

and the state of t

1.200

WEST BANK INSTALLATIONS

Fort Kobbe

Located on the Bay of Panama on the west bank of the Panama Canal, Bruja (Witches) Point Military Reservation was established on August 11, 1928. Although the 1,804-acre tract was considered a 'permanent military post,' Fort Bruja was "incorporated as a subpost of Fort Amador" by a General order of the War Department.



Fort Kobbe

In the late-1920s, early defense positions at Bruja Point included batteries Haan and Murray. Battery Haan, which consisted of two 16-inch "naval-type rifles on barbette, or fixed mounts," was named in honor of Major General William C. Haan; Battery Murray, which also consisted of two 16-inch guns, was named in honor of Major General Arthur Murray. "Both Murray and Haan served as members of the original Joint Army-Navy Panama Canal Fortifications Survey Group of 1910." 43

In 1932, the name of part of the reservation was changed to Fort Kobbe, in honor of Major General William A. Kobbe. General Kobbe, having served with the 3rd Artillery during the Spanish-American War, died on November 18, 1931. The remainder of Bruja Point Military Reservation became Bruja Point Air Base.

On February 25, 1940, the reservation's boundaries were expanded to 3,953 acres, and on June 20, 1941, the status of Fort Kobbe changed from that of a subpost of Fort Amador to an independent post which included what was then called Howard Field.



Former Battery at Fort Kobbe

page 41





Residential quarters, Fort Kobbe

Batteries Haan and Murray, which were originally manned by the Fourth Coast Artillery Regiment, were deemed obsolete following World War II, and were subsequently scrapped.

In 1952 that portion of Fort Kobbe used as an air field (Bruja Point Air Base) was officially separated and redesignated Howard Field.

Howard Air Force Base



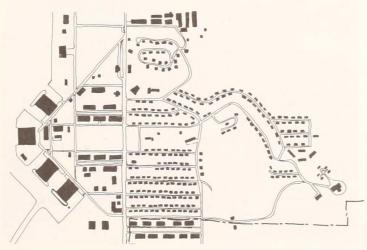
Originally part of Bruja Point Military Reservation, on December 1, 1939, the name of Bruja Point Airfield was changed by General Order

of the War Department to Howard Field, in honor of Major Charles H. Howard (Air Service, U.S. Army). Major Howard served a tour of duty with the 7th and 25th Observation Squadrons at France Field on the Atlantic side of the Isthmus. Major Howard died on October 25, 1936, in an airplane accident near Bryans Mills, Texas.

Howard Field was redesignated Howard Air Force Base in 1962.



Residential quarters, Fort Kobbe



Howard Air Force Base, Canal Zone





Housing at Howard Air Force Base

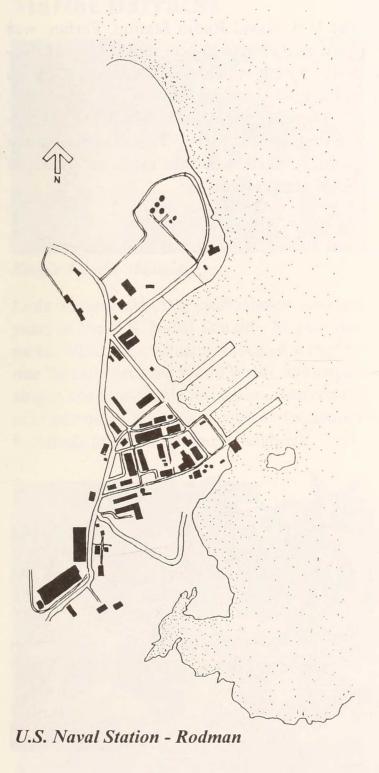


Officers' Club at Howard Air Force Base



Theater at Howard Air Force Base

U.S. Naval Station - Rodman



U.S. Naval Station-Rodman was named for Captain Hugh Rodman, U.S. Navy, who served as Marine Superintendent and as Superintendent of Transportation of the Isthmian Canal Commission/The Panama Canal.

Originally a "tidal marsh of approximately 20 and 30 feet of soft organic clay overlaying firm soil,"⁴⁴ a license was granted on May 19, 1932, to the Navy Department for the construction of the first of the west bank naval facilities. Construction of the piers and other facilities was completed around 1937.



Former barracks

The Rodman U.S. Naval Reservation encompassed, at one time or another, several naval holdings on the west bank of the Panama Canal, including an Ordnance Department, the U.S. Naval Station-Rodman, the Marine Barracks, the Lacona housing area, Camp Rousseau and the Cocoli housing community.

Pacific Division page 44

Residential quarters at Rodman



Family housing at Farfan

Farfan Housing Community

The U.S. Naval Radio Station, Farfan, was construted on an 820-acre reservation in 1941-1942, during which time the naval holdings throughout the Canal Zone were increasing. Between 1947 and 1948, 78 units of family housing were built on part of the Farfan reservation property which was then made an Annex of Naval Station Rodman.



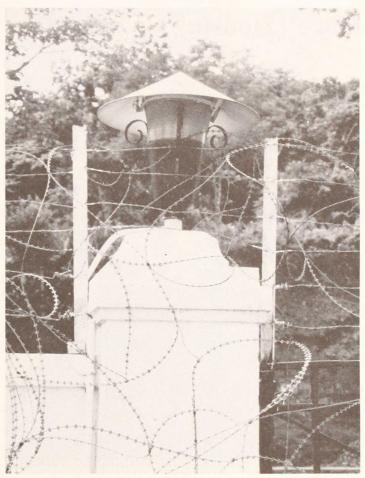
Family housing at Farfan

U.S. Naval Station -Marine Barracks



Single Family Housing

Little is known about the establishment and early years of the U.S. Naval Station - Marine Barracks. Most of the structures located at the Marine Barracks pre-date World War II, and include single- and four-family residences, unaccompanied personnel housing, electrical distribution buildings, and multi-purpose buildings.

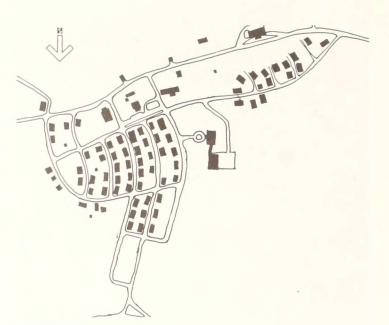


Entry light/gate detail



Administration Building

Cocoli Housing Community



Cocoli Housing Community

By the time the Panama Canal was twenty-five years old, its interoceanic commerce capacity was becoming outgrown. In 1936, the Governor of the Panama Canal Zone was authorized by Congress to investigate a plan to modernize and increase the capacity of the Panama Canal. After cost estimates and plans were drawn, a report was submitted to Congress in 1939, and the Third Locks Project was approved.

The plan basically called for the construction of a "third flight of locks directly alongside the existing locks." Excavation to expand the Miraflores Locks was begun, as was the erection of two 'construction cities' - Diablo on the east bank and Cocoli on the west bank - in anticipation of the influx of laborers for the project.

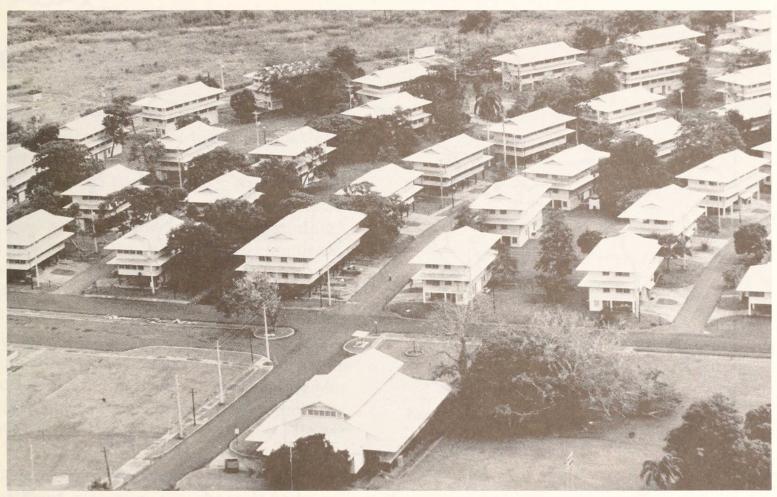
The Third Locks Project was abandoned in 1942 (after spending \$75,000,000 on the project) due to the more pressing demands on manpower and materials associated with the United States' entry into World War II. Although studies were made and other plans were submitted following the conclusion of war, the Third Locks Project was never executed.

The Cocoli family housing community originally consisted of two housing communities, Cocoli Gold (for U.S. citizens) and Cocoli Silver (for non-U.S. citizens). The Panama Canal constructed these communities in preparation for the expanded housing demand associated with the Third Locks Project.

Multi-Family Housing at Cocoli



Pacific Division page 47



Cocoli Housing Community

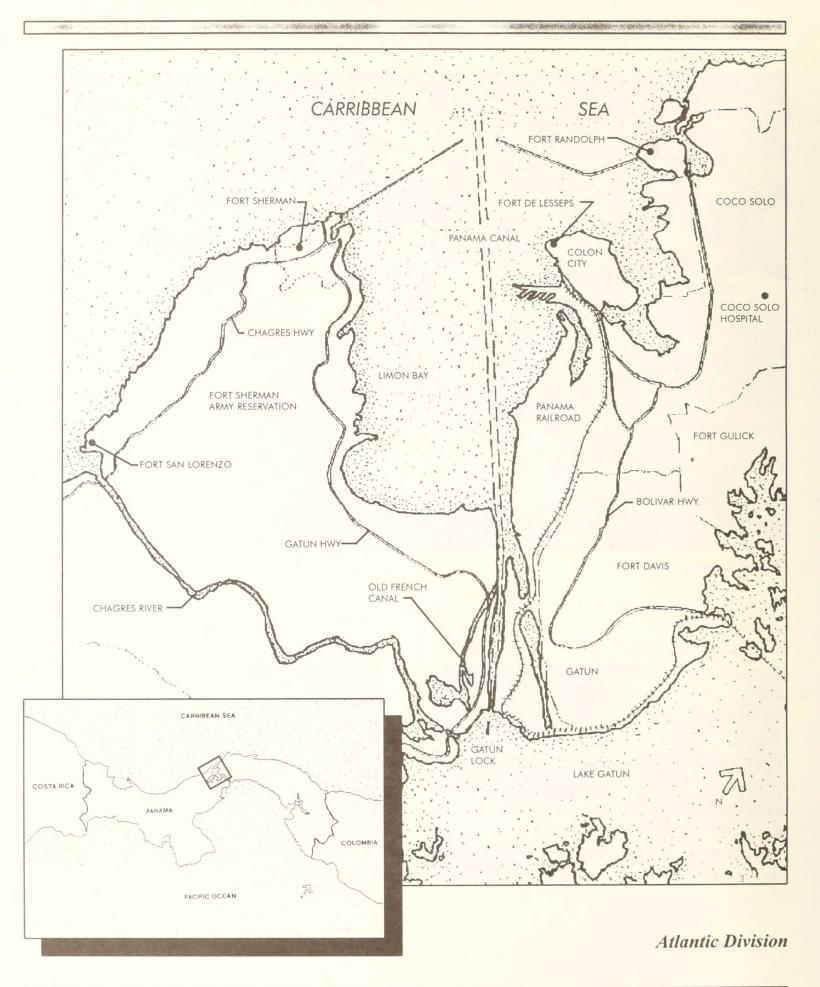
The U.S. Navy acquired the Cocoli Housing Community from the Panama Canal Company in 1951, at which time the area included 360 housing units "and other buildings, facilities, and utility systems." On July 1, 1965, the U.S. Army, whose housing requirements had increased, received Cocoli from the Navy. At the time of the transfer, the Cocoli Housing Community included 275 housing units "and other buildings." While documentation is unclear as to why the number of housing units decreased between the transfers, most likely termites and fire took their toll on the wood-frame buildings.



Gas station at Cocoli

Pacific Division page 48

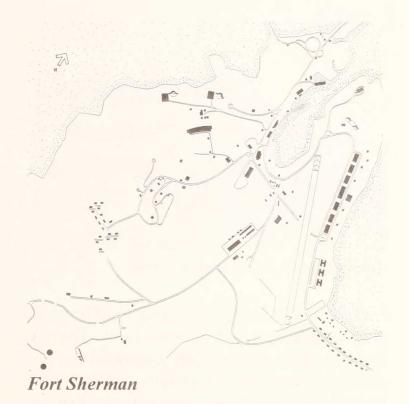
Atlantic Division



Fort Sherman

Located at Toro Point on Limon Bay, adjacent to the northwest entrance to the Panama Canal, Fort Sherman was one of the first three installations planned for the harbor defense of the Panama Canal. Although not formally established by an Executive Order until March 25, 1918, Fort Sherman Army Reservation was named on November 24, 1911, in honor of Civil War leader General William T. Sherman, United States Army. Construction of the coastal defense batteries and the buildings of the installation were begun in January of 1912. The commanding officer arrived on the Isthmus in May 1914, and the troops arrived nearly a year later, in February 1915.

Batteries Howard, Stanley, Mower, Kilpatrick and Baird, consisting of 14-inch and 6-inch guns, guarded and protected the Atlantic entrance of the Panama Canal from Fort Sherman.





Ferry slip at Fort Sherman (1950)



Battery Kilpatrick

Atlantic Division page 50



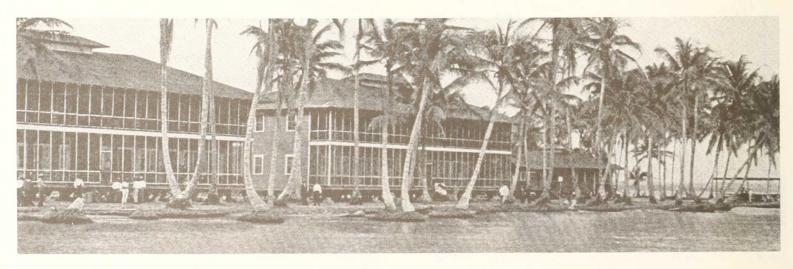
Barracks at Fort Sherman (1950)

Fort Sherman has always been the most isolated of the military posts in the Canal area. During the early days, before roads connected the installation with other U.S. activities, school children residing there were transported by boat to the nearby Fort de Lesseps, from where they walked to the school in Cristobal. Government harbor boats made daily trips, at no charge to U.S. citizens.



Fort Sherman Post Theater

In the mid-1970s, Fort Sherman (which then consisted of 12,171 acres) was used principally as the training area for the U.S. Army School of the Americas' Jungle Operations Training Center which provided "cyclical unit-level instruction in the techniques of jungle survival and operations for battalions from the Continental United States." 48



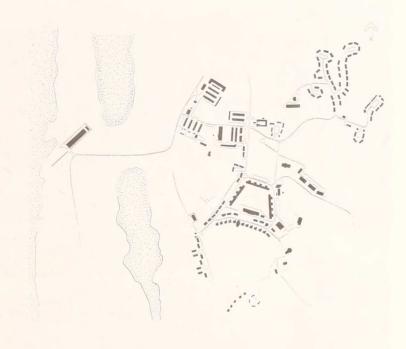
Bachelor Quarters at Toro Point (Pre 1913)

Fort Davis



Initially referred to as 'Camp Gatun,' Fort Davis is located on Gatun Lake near the Gatun Locks at the Atlantic entrance to the Canal. Officially established on De-

cember 22, 1919, the reservation was named by General order in honor of Colonel William D. Davis, 361st Infantry. Colonel Davis served in the Panama Canal Zone "in maneuvers and survey work, which formed the practical bases for defense."⁴⁹ He died in action in France on November 1, 1918, one month prior to being awarded the Distinguished Service Cross for "extraordinary heroism in action near Gespes, France."⁵⁰



Fort Davis



Camp Gatun



Housing at Fort Davis



Fort Davis

During fiscal year 1920, the Secretary of War to The Panama Canal allocated fundings for the Army's construction program that included a provision for the construction of quarters and barracks for one regiment of Infantry at Fort Davis.

The area of Fort Davis was enlarged in 1939, during which time the A.H. Green area was constructed. Barracks construction and "general improvement of the post"⁵¹ was implemented during World War II to accommodate the increase in number of personnel stationed there.

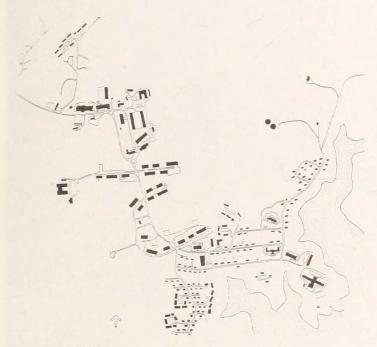


Octagonal Theater at Fort Davis

Atlantic Division page 53

Fort Gulick

Located "on the western shore of the Quebrada Ancha Arm of Gatun Lake," the Fort Gulick Military Reservation was established by Executive order on April 16, 1941. Fort Gulick was named in honor of Major General John Wiley Gulick, Chief of the Coast Artillery from 1930 to 1934.



Fort Gulick

Fort Gulick was home of the U.S. Army School of the Americas, "where hundreds of Latin American officers and enlisted men [were] trained in technical military skills, leadership and doctrine. The school [drew] students from most of Central and South America." Established

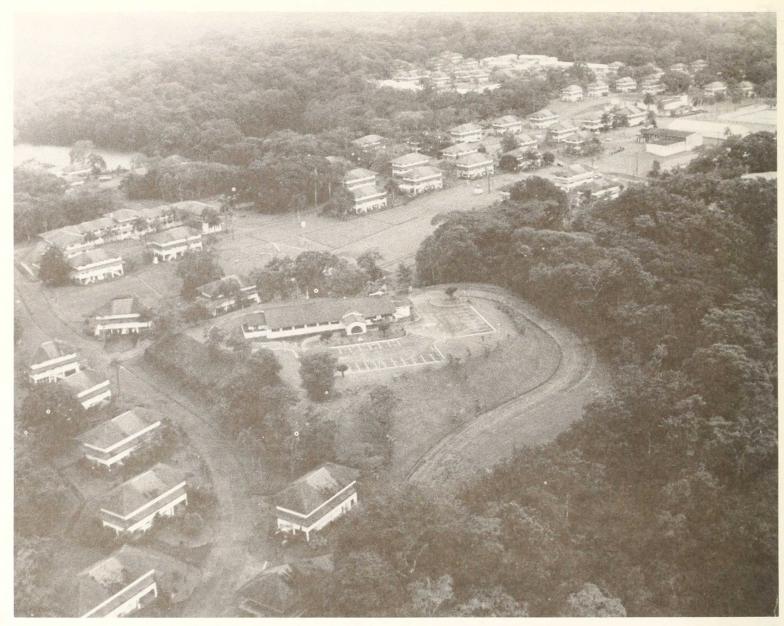


Former U.S. School of the Americas

in 1949, the school at Fort Gulick graduated more than 34,000 students before moving to Fort Benning, Georgia, in 1984.

In compliance with the Panama Canal Treaty of 1977, Fort Gulick became a 'Military Area of Coordination' on October 1, 1984. At the same time, all of Fort Gulick, with the exception of family housing, the ammunition storage area, and a number of community service facilities, reverted to the control of the Republic of Panama. Building 400, the former School of the Americas which was originally constructed in 1942 as a Sector Hospital, was included in the turnover.

Those portions of Fort Gulick over which the Republic of Panama gained control were renamed Fort Espinar, in honor of General Jose



Fort Gulick circa 1978

Domingo Espinar. Born in the Santa Ana section of Panama City, General Espinar played a significant role in the Republic of Colombia's War of Independence from Spain in 1821. After fighting with Simon Bolivar in Peru and

Bolivia against the Spanish Crown, Espinar became the commanding general of the Isthmus of Panama in 1821. The name change did not affect the remaining U.S.-controlled portion of Fort Gulick.

Atlantic Division page 55

Coco Solo

The Coco Solo Naval Reservation was officially established by Executive Order on April 9, 1920, "to the uses and purposes of a naval reservation, to be under the control of the Secretary of the Navy."⁵⁴

Construction of the original Coco Solo Submarine Base began as early as 1919, during which \$630,627.39 was expended by The Panama Canal from an appropriation of the Navy Department.

In 1957 (as part of a series of name changes), the U.S. Naval Station, Coco Solo, became the Coco Solo Annex of the U.S. Naval Station, Rodman. At the same time, the Canal Zone Government "acquired 229 acres of Coco Solo land together with 285 Public Quarters and a considerable number of other buildings and facilities which were excess to the requirements of the Navy." The complex was transferred in 1968 to the U.S. Naval Security Group Activity, Galeta Island.



Coco Solo Submarine Base



Former Administration Building



Former Housing at Coco Solo

Former Installations

Since World War II, numerous installations have been closed down and the facilities transferred to the Republic of Panama. These bases played various roles in the Department of Defense's military mission of guarding and defending the Panama Canal.



Col. Goethals reviewing the Marines at Camp Elliott

Camp Elliott/Camp Gaillard

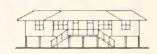
In 1904, two Marine camps were established on the Isthmus of Panama. One of these was Camp Elliott, which was located near the town of Culebra on what is now the west bank of the canal.

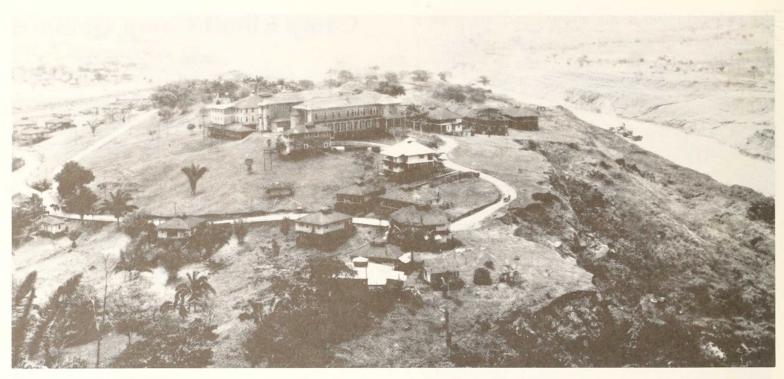
Following the completion of the Panama Canal, the Panama Canal government began a policy of giving the Army its excess buildings and property in former construction-era communities. Two of the communities no longer required at that time by The Panama Canal were Culebra and Empire.

Empire was "taken over by the Army"⁵⁶ on November 25, 1914; Culebra was transferred to the Army on March 25, 1915. The land and buildings of both of the abandoned ICC communities were incorporated into Camp Elliott.



Marine Post at Camp Elliott





Camp Gaillard, 1920

Camp Elliott was renamed 'Camp Gaillard' in honor of Colonel David D. Gaillard. As chief of the Central Division during canal construction, Col. Gaillard was responsible for the construction of the Culebra Cut, which was also renamed in his honor after his unexpected death from a brain tumor.

Home of the 20th Brigade, Camp Gaillard was "manned by Puerto Rican recruits [and] officered by Americans"⁵⁷ under the command of Brigadier General Fox Connor, who during World War I had been chief of operations at General Pershing's field headquarters. When he received orders for Camp Gaillard, General Conner offered the position of Executive Officer

to a young officer personally recommended by General George Patton - Major Dwight D. Eisenhower. Major and Mrs. Eisenhower began their two year tour at Camp Gaillard in January of 1922.

On October 8, 1927, following the completion of the permanent military installations at the terminals of the canal, Camp Gaillard was deactivated. The remaining buildings were either moved or demolished, and the land was converted to an artillery practice range, called Empire Range. In September 1994, parts of Empire Range were transformed into temporary camps for Cuban migrants during Operation Safe Haven.

Camp Otis



U.S. Marine and Bugle Corp at Camp Otis

Camp Otis, the second of the two original U.S. Marine installations, was located east of Camp Gaillard. Camp Otis included a detachment of the U.S. Marine Drum and Bugle Corps.



Panama Air Depot

Initially developed by The Panama Canal Commission in 1931 as an industrial area "where will be the motor car repair shops and garage, the district quartermaster's shops, the constructing quartermaster shops, and the municipal division shops and storage,"⁵⁸ the Panama Air Depot (PAD) was initially referred to as the 'Corundu project.'

By 1939, the area had been reassigned to the jurisdiction of Albrook Air Field. In later years, the area supported the Defense Mapping Agency Inter-American Geodetic Survey and a number of tenant activities which used the PAD warehouse facilities.

The Panama Air Depot was transferred to the Republic of Panama on 'Treaty Day,' October 1, 1979, in compliance with the Panama Canal Treaty of 1977.

U.S. Marines participate in an Isthmian Canal Commission 4th of July Athletic Event, 1912

Camp Rousseau

Camp Rousseau was named for Commander Harry H. Rousseau, an experienced engineer and a "personal appointee of President Roosevelt" who served as a Board Member of the third Isthmian Canal Commission.

On March 4, 1915, Commander Rousseau was recognized by the U.S. Congress for his "distinguished Service" in connection with his work on the Isthmus. By order of the President of the United States, Commander H.H. Rousseau was promoted to the grade of Rear Admiral of the Lower Nine, United States Navy.

During the early 1940s, a hospital facility was constructed at the 50-acre Camp Rousseau. Between 1947 and 1948, the hospital was converted into 72 housing units. The entire facility was demolished in 1962.

Since 1979, the area has been used by the U.S. Army under permit from the Navy as a storage and staging area for exercises.

Fort DeLesseps

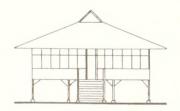
A small installation located adjacent to the Hotel Washington within the city of Colon, Fort DeLesseps was named in 1911 in honor of Count Ferdinand de Lesseps, the 'builder' of the Suez Canal and the man who led the French attempt to build the Panama Canal.

The property on which Fort DeLesseps was constructed was acquired by the U.S. Army from the Panama Railroad Company. Jurisdiction over the post, however, was never formally ceded to the United States.

The Coast Artillery post, whose population in 1936 was 190, included eight sets of Captains' quarters, a Headquarters barracks which accommodated 84 men, three quadruplexes for Noncommissioned Officers, a 200-seat 'Recreation Pavilion,' and a 3-bed medical station. These properties, in addition to the guns of Battery Morgan, were located on an area comprised of 3.7 acres.



Housing at Fort DeLesseps



The 1955 'Treaty of Mutual Understandings and Cooperation with the Republic of Panama' provided for the transfer to the Republic of Panama of Fort DeLesseps, which was no longer considered "required for canal purposes." 61

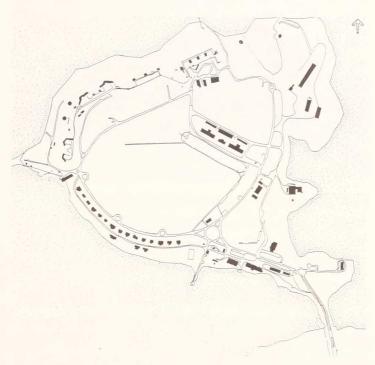


Housing at Fort DeLesseps



Fort DeLesseps Dock Facility

Fort Randolph



Fort Randolph

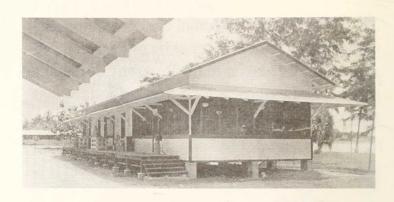
Fort Randolph was established on Margarita and Galeta Islands (near Coco Solo) on April 9, 1920, and was named in honor of Major General Wallace F. Randolph, U.S. Army.

On January 31, 1933, the Fort Randolph Army Reservation was increased to 3,691 acres, and on September 13, 1940, "the Secretary of War transferred to the Navy Department a tract of land containing approximately 1,250 acres which included a portion of Fort Randolph." 62

Included at Fort Randolph were coastal artillary barracks, family housing, and administrative facilities.



Fort Randolph Quartermaster Stables



Fort Randolph RSO Office and Warehouse, May 1916

In 1953, part of the Fort Randolph Army Reservation was transferred to the Navy to be used by the Naval Security Group Activity. By 1970, the reservation, consisting of only 233 acres, had been declared inactive.

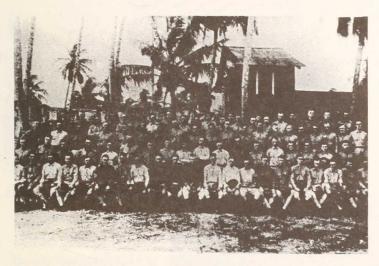


Fort Randolph Largo Remo Bunk House (20-man), 1915



Fort Randolph One-Family Lieutenant's Quarters, December 1915

France Field



The first troops at France Field

The 7th Aero Squadron, under the command of Captain H.H. 'Hap' Arnold, arrived on the Isthmus in 1917. The Squadron, with a total of 51 men, was stationed temporarily at Corozal and Camp Elliot before being transferred to Fort Sherman in August of 1917.

Recognizing that aircraft accommodations at Fort Sherman were inadequate, the 7th Aero Squadron was moved in February of 1918 to the newly constructed France Field Reservation, "the first real air base in the Canal Zone." France Field Reservation, encompassing 634.68 acres on Manzanillo Bay near Forts Randolph and DeLesseps, was formally established and named by Executive Order on April 9, 1920.

Buildings constructed at France Field during 1920 included officers' quarters and barracks, "one steel hangar, 110-foot span by 200 feet long, and one steel hangar 66-foot span by 140 feet long." 64

Air mail service between the United States and the Panama Canal Zone was implemented on February 6, 1929, with bi-monthly flights by Pan-American Airways flying between Miami and France Field. Pilot of the first flight was Colonel Charles A. Lindbergh (U.S. Army Air Corps), "who conducted a lone flight over approximately the route of this sort in January, 1928, as part of a good will tour through the course of the Caribbean area." 65

By 1956, it had been determined that France Field was "excess to Air Force requirements," and in 1957 the 1,653-acre France Field was licensed to the Army "for training purposes." ⁶⁷

Jurisdiction over France Field was transferred to the Coco Solo Navy Reservation on August 27, 1964. By 1970, the property had been transferred back to the U.S. Army, and on 'Treaty Day' the property was turned over to the Republic of Panama.



The 'Spirit of St. Louis' piloted by Col. Charles A. Lindbergh circles France Field, January 23, 1928



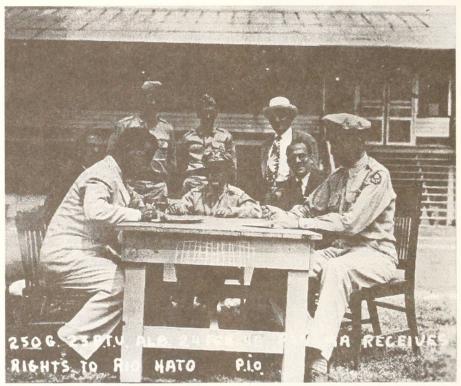
Rio Hato

The U.S. began negotiations with the Republic of Panama as early as 1939 to obtain land outside of the Panama Canal Zone for military use and in particular for U.S. Air Force installations. In a pact signed in 1942 between the two countries, more than one hundred tracts of land to be

used by the U.S. were identified throughout the Republic of Panama and its off-shore islands. In exchange for the use of these sites until "one year after the signing of definitive [World War II] treaty of peace,"68 the U.S. agreed to turn over the water supply facilities of Panama City and Colon and more than \$12 million in railroad property to the Republic of

Panama. The U.S. also assumed Panama's debt of \$2.5 million, and agreed to "fund the construction of a tunnel or bridge across the Panama Canal."

One of the sites identified in the 1942 agreement was the Rio Hato air field, located 75 miles east of the Panama Canal Zone. Established for use as a maneuver practice area, Rio Hato offered a "varied terrain, ranging from high to low, from woods to open wasteland."



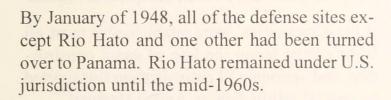
Signing the Rio Hato Turn-over Agreement.

Following the conclusion of World War II, many of the installations were returned to the Republic of Panama. By July of 1947, 98 of the 134 sites had reverted, and the Sites Defense Agreement, which outlined the length of occupation of the remaining 36 sites, was signed by representatives of both countries on December 10, 1947. The U.S. proposed

long-term leases, with special interest in retaining Rio Hato; however, Panama's National Assembly rejected the agreement and it was never ratified.



Raising the Flag at Rio Hato



Other former installations include the 126.07-acre Paitilla Point Military Reservation, located northeast of Panama City, which was established by Executive order on September 1, 1920; the Gatun Lake Military Reservation, which included the islands of Zorra and Piedras, and which was established by a Canal Zone Order signed by the Secretary of War on December 1,



Barracks at Cerro Pelado

1946. The 257.8-acre Cerro Tigre Ordnance Depot, located on the north side of the forest preserve near Maddan Dam, was established on June 16, 1930, as an ammunition handling and storage support facility and reverted to the Republic of Panama on 'Treaty Day.' The 278.80-acre Cerro Pelado Ammunition Depot Military Reservation was set apart and formally established on September 26, 1938. Cerro Pelado is currently used by the Panama Canal Commission under license from the U.S. Army.



Cerro Tigre Barracks, June 1930



Igloo magazine at Cerro Pelado

U.S. Army Medical Activity Panama





Among the first set of instructions issued by President Theodore Roosevelt to the Isthmian Canal Commission was "that every precaution be taken to protect the employees of the [United States] Government against the tropical diseases that [had] previously caused a high mortality at Panama." The French endeavor to construct a canal was defeated because its leaders did not take into consideration the impact that these 'tropical diseases' - specifically yellow fever and malaria - would have on its work force. As a result, 22,000 laborers died.

In order to carry out Roosevelt's edict, it was necessary to provide facilities for treating patients on the Isthmus. The \$50,000 rehabilitation of the abandoned French Canal Company hospital, L'Hospital Notre Dame du Canal, began almost immediately upon taking possession of the Canal Zone. Built on Ancon Hill in 1882, the hospital was renamed 'Ancon Hospital' by gubernatorial decree in 1905.



Hospital grounds, French Hospital at Ancon

'Line dispensaries' were established at most all labor camps along the line of canal construction, and seriously ill patients were transported by special railroad car to Ancon Hospital.

Following the completion of the Canal, the ICC implemented a construction program for permanent medical facilities at Colon and Balboa, at Palo Seco for specialized medical facilities to treat lepers, and at Corozal to treat the mentally unstable.



Culebra Island Quarantine Station

In compliance with the implementation of the Panama Canal Treaty of 1977, the United States Army Medical Activity - Panama assumed all responsibility for the operation and management of U.S. medical and dental facilities in the former Panama Canal Zone on 'Treaty Day,' October 1, 1979.

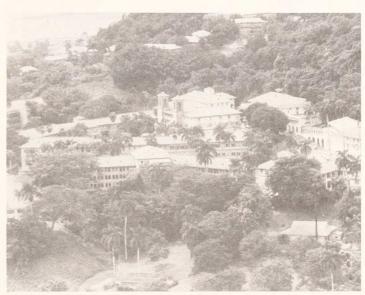
Gorgas Hospital

1 GORGAS

2 HERRICK HEIGHTS

Gorgas Army Hospital

One of the most architecturally and historically significant groups of buildings in the former Panama Canal Zone, Gorgas Hospital was constructed on the same site as the French construction era L'Hospital Notre Dame du Canal.



Gorgas Hospital - circa 1978



Administration and Clinics Building - circa 1920



Covered passageway, Gorgas Hospital

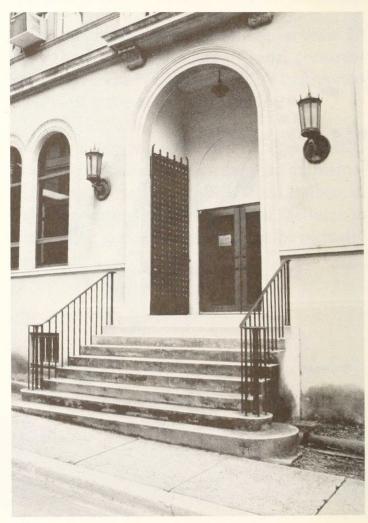
In 1914, Congress authorized funds for the construction of a hospital complex in Panama. Design was begun with "a great deal of study [being] given to the design of the buildings in an effort to decide upon that form of composite construction that would make for economy and yet meet all the rigid requirements demanded by the health department as regards character of interior and exterior finish." Construction was started in August of 1915. At the time of its completion, Ancon Hospital was "the largest and most modern of any hospital owned by the United States government."

At the time it was constructed, the complex retained the name 'Ancon Hospital,' but was renamed in memory of Major General William Crawford Gorgas by Joint Resolution of Congress in March of 1928.

Section A of building #255 was originally two separate ward buildings that accommodated twenty-nine "white American male" patients

each. A service section connected the two wards, "providing toilet accommodations, a dining room, nurses' rooms, and special rooms on each floor."⁷⁵ Section A was completed on May 1, 1916.

Section B of building #253 also served as two ward buildings accommodating 106 patients. The wards, which were first occupied on April 10, 1917, included thirty-seven private rooms for "white females" and a nursery for infants. All of the ward buildings were connected to the



Entry to the Mortuary Facility

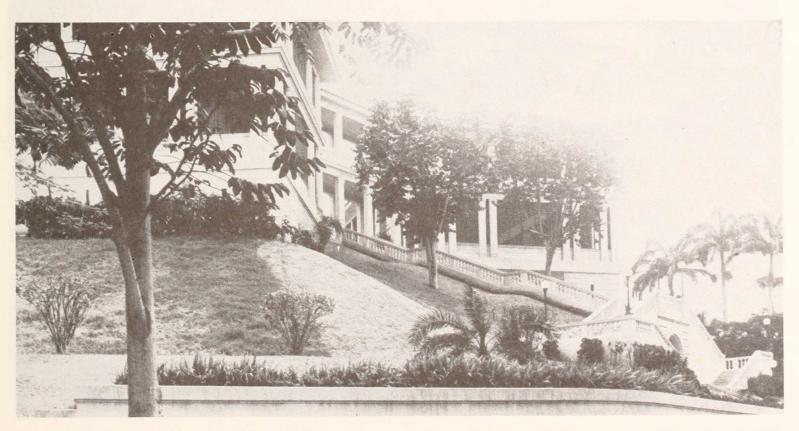


The Superintendent's Residence, Ancon Hospital - circa 1920

Administration and Clinics Building by sheltered passageways "so that operative cases [could] be transferred to and from the operating rooms with minimum use of elevators or stairways and always under cover."⁷⁷

The mortuary is the only building of the Gorgas Hospital complex which still serves its original function. It was the first of the hospital buildings to be completed.

Building #286, the original residential quarters for the Superintendent of Hospitals, was constructed in 1918. The building is currently the Headquarters of U.S. Army Dental Activity - Panama.



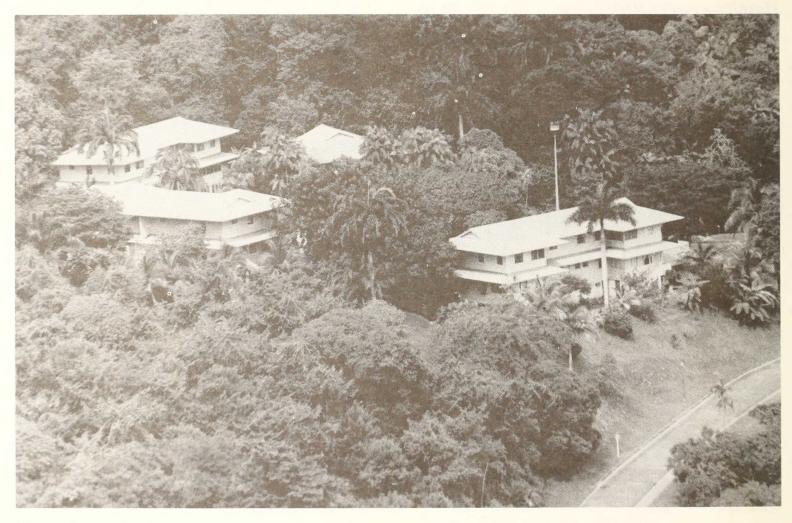
The New Ancon Hospital - circa 1920

Herrick Heights

Herrick Heights, a housing community on Ancon Hill above Gorgas Hospital, consists of family housing constructed in 1933 and 1934 for doctors associated with the hospital. The community was named for Dr. A.B. Herrick, former Acting Superintendent of Ancon Hospital.



Herrick Heights Housing

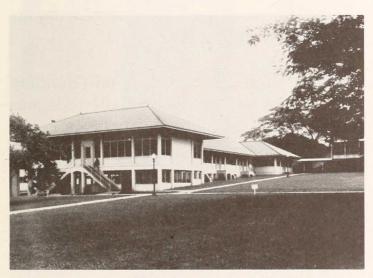


Herrick Heights

U.S. ARMY MEDICAL ACTIVITY PANAMA

Corozal Hospital

In addition to providing treatment to the physically ill, the Isthmian Canal Commission was responsible for treating the mentally ill. The first 'insane asylum' in the Panama Canal Zone was located within the Ancon Hospital compound. After the completion of the Canal, a separate facility was established at Corozal, on the east side of Gaillard Highway across from the Corozal Cemetery.



Former Corozal Insane Asylum Building

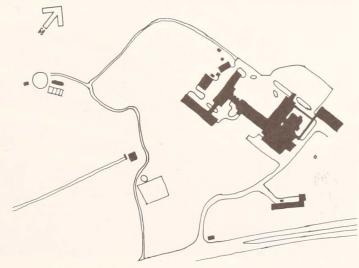
In the late 1920s and early 1930s, new concrete walled and clay tile-roofed ward facilities were constructed to accommodate "patients of all classes, colored, foreign, enlisted personnel of the Army and Navy, and Panama Canal employees and members of their families."⁷⁸

Coco Solo Hospital

During World War II, several previously established Panama Canal area military reservations, including the Coco Solo Submarine Base, were improved and expanded. A 200-bed hospital was commissioned in September, 1942, and the Coco Solo Naval Hospital was constructed on a 41-acre tract in the southwestern corner of what was later called Coco Solo Navy Station, just off the Boyd-Roosevelt Highway.

In 1954, the Coco Solo Naval Hospital was transferred to the Panama Canal Company. When the Department of Defense assumed responsibility for all U.S. medical facilities, Coco Solo Hospital was included in the turnover of treatment facilities.

In compliance with the Panama Canal Treaty, Coco Solo Hospital was turned over to the Republic of Panama in June of 1994.



Coco Solo Hospital

U.S. ARMY MEDICAL ACTIVITY PANAMA

U.S. Army Sector Hospitals

By the 1930s it had been determined that, because of differing hospital requirements between military personnel and PCC employees, there was a need for independent hospital facilities. In 1939, Congress approved funding for the construction of three Army hospitals at Fort Clayton, Fort Gulick and Fort Kobbe.

The U.S. Army designed and constructed several 'sector hospitals' at the onset of World War II in order to meet the local military demand as well as the anticipated expansion of "hospital requirements of the armed forces" associated with the combat in the Pacific theater.

"The Fort Clayton [Sector] Hospital represented a significant stage in the advancement of military medicine in the Panama Canal Zone. It also represented a significant stage in the separation of military and civilian hospitalization services that had been centralized during canal construction days and until World War II. Until its construction, military personnel were forced to rely upon civil authorities for hospital space and treatment."80

The Fort Clayton Sector Hospital (Building #519) was completed by 1943, "with a normal capacity of 700 beds, 100 emergency beds and a potential expansion of 200 more beds." Building #518, the current Clayton Guest House, was constructed at the same time to house the nurses who worked at the hospital.

The Fort Gulick Sector Hospital (Building #400), which had a capacity of 401 beds, was converted into an educational/training center (the School of the Americas). The current Fort Gulick Guest House was originally nurses' quarters.



Former Gulick Sector Hospital

U.S. ARMY MEDICAL ACTIVITY PANAMA

Camp Rousseau Hospital



Army Sector Hospital, Building 519, Ft. Clayton

During the early 1940s, another hospital facility was constructed at the previously established Camp Rousseau. This 50-acre Naval station was named for Commander Harry H. Rousseau, a "personal appointee of President Roosevelt" who served as a Board Member of the third Isthmian Canal Commission.

Between 1947 and 1948, the hospital was converted into 72 housing units. The entire facility was demolished in 1962, and the site has since been used by the U.S. Army, under permit from the Navy, as a training area for exercises.

Department Of Defense Dependents Schools



While the first Isthmian Canal Commission employees to arrive on the Isthmus were, for the most part, "either single or preceded their dependents," by September of 1904 there were more than 1,000 school-aged children living within the Panama Canal Zone. With the arrival of more and more family members to the Canal Zone, it became the responsibility of the Isthmian Canal Commission "to educate the youth as well as to make the area healthy and to construct and operate the canal." ⁸⁴

In September of 1904, the ICC authorized the establishment of a school system "to meet the needs of an exceptional American community," and the first Superintendent of Schools, Donald C. O'Connor, was hired later that year. The first Canal Zone school opened in Corozal on January 2, 1906.

Because communities were located throughout the line of the canal construction, it was necessary to establish quite a number of schools, for both elementary and high school educational levels. In addition, separate schools were es-



Panama Canal School Sign, 1953

tablished for the children of Gold Roll employees (white U.S. citizens) and for those of Silver Roll employees (all others).

The Canal Zone government was aware of the impact its educational system would have on both the Zone and the surrounding communities. It was felt that "the best possible educational system [was] required... since the very existence and future of our form of government is dependent upon public education, and desirable... in order to convey the proper impression to non-Americans judging American education by the Canal Zone school system."86 With the view that future employees of The Panama Canal would be educated by the Canal Zone schools, the curriculum included "drafting, appropriate mathematics, elementary mechanics, shop methods, and business English... Thus commenced the question of how the Zone schools would respond to the problem of vocational training needs vis-a-vis Canal training needs."87

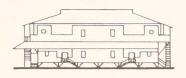
Curriculum during the earliest years also included Spanish as a second language, "the Palmer method of penmanship" and music, and at the high school level "algebra, geometry, Latin, Spanish, 'rhetoric,' botany, biology, physical geography, and general history." At the kindergarten level, activities included "playing, singing, dancing, weaving, bead stringing, and like activities." 90

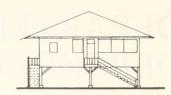
Following the completion of the Canal, plans were made for permanent school facilities in each of the Panama Canal Zone communities, specifically Balboa-Ancon, Pedro Miguel, Gatun, and Cristobal. Between 1916 and 1920, a total of \$560,000 was spent on new school buildings. By 1940, however, the number of classrooms had become inadequate.

Plans for the much needed construction of several new schools were initiated. The building program was precipitated by the Third Locks Project, which entailed the construction of a new set of locks at all three lock sites. It was anticipated that the school population would increase dramatically, and to accommodate the increased number of students, new facilities were required.

With the U.S. entry into World War II, the Third Locks Project was canceled and "the serene, isolated, and perhaps innocent atmosphere of the Zone milieu was forced to surrender its more parochial concerns for the demands of what was soon termed the 'war effort.'"⁹¹ Zone schools were no exception. The construction projects were suspended indefinitely.

A restructuring of the schools took place in 1954, when the designation 'White Schools' was officially changed to 'United States Schools,' and the former 'Colored schools' were redesignated 'Latin American Schools.' "The change was more than cosmetic because the old Colored





Schools had been taught in English, lacked the upper secondary grades, and stressed vocational training. The Latin American Schools, whose students were Panamanian nationals, were operated with Spanish as the language of instruction, achieved a full secondary system, and acquired a curriculum that was academic and aligned with the schools of Panama."⁹²

In 1955, the student population of the U.S. (English speaking) schools, kindergarten through junior college, was 6,799. Children of active duty military personnel comprised 3,605 of these students. There were at that time sixteen U.S. schools, eleven elementary, two junior high, two high schools, and a junior college.

Panama Canal College

As children of families living in the Panama Canal Zone graduated from high school, they were forced to either forsake higher education or move to the United States to attend college. "Hoping to delay this early separation until their children were more mature and better able to fend for themselves in the United States, besides enabling themselves better to afford the cost of a college education, parents began to press for the establishment of a junior college in the Canal Zone." "93"



Former Gamboa Elementary School



Working in conjunction with the Canal Zone government, parents were successful in their campaign to establish a Canal Zone college. On September 25, 1933, sixty-two students enrolled as college freshmen. In 1935, twenty-four students were awarded "the degree of Associate in Arts."⁹⁴

Originally housed in what is Balboa High School, the Panama Canal College relocated to La Boca in 1962.

Balboa High School

Because student enrollment increased annually and schools became over-crowded, the Panama Canal government began planning for the construction of the present Balboa High School after receiving funding on August 10, 1933.

Originally intended as a college facility, the complex served both as a college and as a high school until 1962, when funding became available for new college facilities.

The school complex is composed of several buildings, including three connected buildings of the Mission Renaissance architectural style, a shop building, a gymnasium (constructed in 1942) and stadium area, an R.O.T.C. building (constructed in 1958) and an auditorium.

Balboa High School was at the center of international political history on January 9, 1964, during what has come to be termed the 'Flag Incident.' Student demonstrations over the flying of the U.S. and Panamanian flags within the Panama Canal Zone had a direct impact on the renegotiation of the original 1903 treaty.



Balboa High School

During Operation Just Cause, Balboa High School became a food and clothing distribution center as well as a temporary home to more than 5,000 local citizens from the Chorillo section of Panama City. The majority of the refugees were housed in the gymnasium and stadium area, while the one-story R.O.T.C. building was used as a medical clinic.

sure time enjoyed school magazines, computers, television, and other audio visual materials and equipment. The teachers' lounge became the headquarters for communication while the cafetorium served as a hospital. The school grounds were used as a storehouse for many types of military hardware."

Curundu Junior High School

Planning for the construction of the Curundu Junior High School was begun in 1959, and the five-building school complex was completed in 1964 at a cost of \$4,400,000. The most distinctive of the buildings is the geodesic-domed cafetorium, which was built at an additional cost of \$935,000.

During Operation Just Cause, Curundu Junior High School "was used as a command and communication center, a barracks, and a hospital... The men slept in the classrooms and in their lei-



Corundu Junior High School



Courtyard - Balboa Elementary



Balboa Elementary School

Constructed in 1917, Balboa Elementary School, located in Balboa at the end of the Balboa Prado, is one of the most architecturally significant of the buildings located in the former Panama Canal Zone. Three stories in height, the center of the structure is a "full-height open atrium" typical of the Italianate Renaissance style.

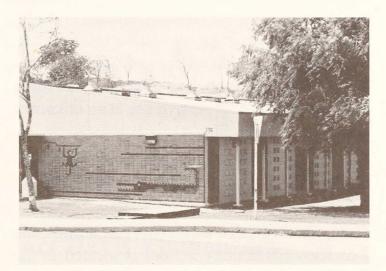
For many years, elementary level classes were held on the lower floors of the structure, while high school classes were held on the third floor.



Balboa Elementary Schoolhouse

Curundu Elementary School

Located near the rear gate of Fort Clayton, construction of the Curundu Elementary School was initiated in 1965, with classes opening to students in 1968.



Curundu Elementary School

Diablo Elementary School

Diablo Elementary School was constructed in the community of Diablo Heights in conjunction with the Third Locks Project of 1939. The main school building and the gymnasium of wood siding were completed in 1940, with additions to the school made in 1959 and 1963.

The elementary school facilities were temporarily used as a junior high school facility from March of 1961 until the completion of Curundu Junior High School in 1964.

Fort Clayton Elementary School

Located on Fort Clayton's Soldiers' Field, directly opposite Building #95, construction of the building that houses the Fort Clayton Elementary School was completed on January 13, 1940. Originally the building served as a 180-man barracks for the Headquarters and Service Company, 11th Engineers. The three-story building was converted to its present use at an unknown date.

Los Rios Elementary School

Comprised of three single-story buildings, the Los Rios Elementary School is located in the housing community of Los Rios, between Albrook Air Force Station and Fort Clayton.



Fort Clayton Elementary School

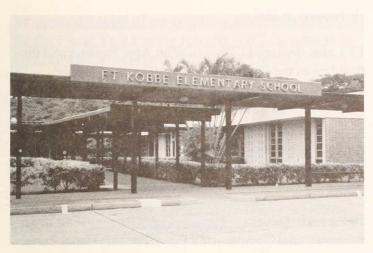
Fort Kobbe And Howard Air Force Base Elementary Schools

The Fort Kobbe Elementary School is a singlestory building of modern construction. The three-story Howard Elementary School, constructed around 1949 as a high school, is located on Howard Air Force Base.

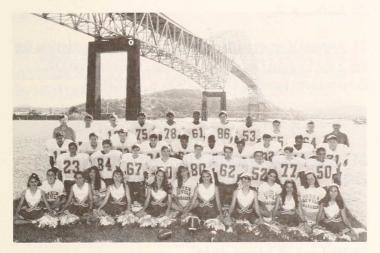


Howard Elementary School





Fort Kobbe Elementary School



PCC Football Team and Cheerleaders



Aerial View of the first Cristobal High School

Cristobol Junior - Senior High School

Funding for the original Cristobal Junior-Senior High School came in 1933 from the National Industrial Recovery Act. Construction of the facility in the Panama Canal government community of New Cristobal was begun almost immediately and was completed in September, 1933.

In 1959, the school was relocated to a remodeled Navy barracks building at the former Coco Solo Naval Base.

Fort Davis Elementary

Construction of the single-story Fort Davis Elementary School complex located on Fort Davis was completed in 1964.



New Cristobal High School

Footnotes

- 1 LaFeber, Walter. <u>The Panama Canal: The Crisis in Historical Perspective</u>. New York: Oxford University Press, 1978, p. 5.
- 2 Kilbey, C.W. <u>Panama Potpourri</u>. New York: Vantage Press, 1968, p. 36.
- 3 LaFeber, p. 12.
- 4 Nicolay, Helen. <u>The Bridge of Water: The Story of Panama and the Canal</u>. New York: D. Appleton-Century Company, Inc., 1940, p. 119.
- 5 English, Peter. <u>Panama and the Canal Zone in Pictures</u>. New York: Sterling Publishing Co., Inc., 1975, p. 32.
- 6 Nicolay, p. 160.
- 7 LaFeber, p. 194-195.
- 8 Ibid, p. 184.
- 9 Nicolay, p. 160.
- 10 Core, Susie Pearl. <u>Trails of Progress or The Story of Panama and Its Canal</u>. New York: The Knickerbocker Press, 1925, p. 85.
- 11 Lee, W. Storrs. <u>The Strength to Move a Mountain</u>. New York: G.P. Putnam's Sons, 1958, p. 93.
- 12 Ibid, p. 95.
- 13 Abbot, Willis J. <u>Panama and the Canal in Picture and Prose</u>. New York: Syndicate Publishing Company, 1913, p. 148.
- 14 Ibid, p. 160.
- 15 Ibid, p. 162.

- 16 Nicolay, p. 204.
- 17 Laval, Jerome D. Images of an Age: Panama and the Building of the Canal. Fresno, Californa: Graphic Technology Co., 1978, #40.
- 18 Letter of the Secretary of War, Transmitting the First Annual Report of the Isthmian Canal Commission.
 Washington, D.C.: Government Printing Office, 1904, p. 86.
- 19 "John F. Stevens." <u>Panama Canal Review</u>, Fall 1972. Panama Canal Company: La Boca, Panama Canal Zone, 1972, pp. 4.
- 20 Abbot, p. 8.
- 21 <u>Annual Report of the Isthmian Canal Commission for the Year Ending December 1, 1906</u>. Washington D.C.: Government Printing Office, 1906, p. 100-101.
- 22 Abbot, p. 144.
- 23 <u>Canal Record, Volume VIII</u>. Balboa Heights, Canal Zone: The Panama Canal, p. 327, May 5, 1915.
- 24 Ibid, p. 327, May 5, 1915.
- 25 Ibid, p. 327, May 5, 1915.
- 26 "Military Reservations: Canal Zone," U.S. War Department, 1942, p. 13.
- 27 LaFeber, p. 76.
- 28 Ibid, p. 220.
- 29 Nicolay, p. 279.
- 30 Keller, Ulrich. <u>The Building of the Panama Canal in Historic Photographs</u>. New York: Dover Publications, Inc., 1983, p. 29.

- 31 Annual Report of the Governor of the Panama Canal for the Fiscal Year Ending June 30, 1917. Washington D.C.: Government Printing Office, 1917, p. 161.
- 32 Core, p. 153-154.
- 33 Regn, Elmer M., compiler. "Fort Clayton, Canal Zone: Master Plan Analysis of Existing Facilities". March 1972, p. 16.
- 34 Various fact sheets. Office of the USARSO Historian, Fort Clayton, Republic of Panama.
- 35 Ibid.
- 36 Ibid.
- 37 <u>Land Holdings of the Armed Forces and the Federal Aviation Agency in the Canal Zone</u>. Published jointly by HQ USARSO, HQ USAFSO, and HQ USNAVSO, 1 September 1970, p. 1.
- 38 Ibid, p. 2.
- 39 Wesley, 1LT Gonzales A. "1915-1994, Signal Soldiers, Families Celebrate 79 Years in Panama." The IMA Bulletin. (Volume V, Number 2, April 1994) Fort Clayton, Republic of Panama: DCSIM Printing and Publications Management Office, 1994, p. 3.
- 40 McDonald, MSgt. John W. "Out of the Swamp and Jungle A History of Albrook AFB." <u>Caribbean</u> Breeze, October 15, 1954, p. 7.
- 41 "Military Reservations: Canal Zone," p. 28.
- 42 De Mena, Dolores. "Kobbe Cannons Guard Atlantic." The Tropic Times. May 8, 1992, p. 8.
- 43 "Kobbe Cannons," p. 8.

- 44 "Historic Resources Assessments for Treaty Related Activities, Panama, C.A." [Draft] Prepared by the Environmental Resources Planning Section, Mobile District Corps of Engineers, July 1993, p. 83-84.
- 45 <u>Annual Report of the Governor of the Panama Canal</u> for the Fiscal Year Ended June 30, 1929. Washington D.C.: Government Printing Office, 1929, p. 71.
- 46 Land Holdings, p. 2.
- 47 Ibid, p. 2.
- 48 <u>Annual Historical Supplement FY82</u>. 193d Infantry Brigade (Panama), 1982, p. 3.
- 49 "Military Reservations," p. 34.
- 50 Ibid, p. 34.
- 51 Various fact sheets, Office of the USARSO Historian.
- 52 "Military Reservations," p. 25.
- 53 Scanlan, Tom, assistant editor. <u>Army Times Guide to Army Posts</u>. Harrisburg, Pennsylvania: The Stackpole Company, 1966, p. 26.
- 54 "Reservations Military Naval: Descriptions and Executive Orders." File copies of Executive Orders, maintained by real estate office (Plans and Property Branch, Engineering Division), DEH-Panama.
- 55 Land Holdings, p. 2.
- 56 <u>Annual Report of the Governor of the Panama Canal</u> for the Fiscal Year Ending June 30, 1915. Washington D.C.: Government Printing Office, 1915, p. 238.
- 57 Brandon, Dorothy. <u>Mamie Doud Eisenhower: a Portrait of a First Lady</u>. New York: Charles Scribner's Sons, 1954, p. 135.

Footnotes page 84

- 58 <u>Annual Report of the Governor of the Panama Canal</u> for the Fiscal Year Ending June 30, 1920. Washington D.C.: Government Printing Office, 1932, p. 77.
- 59 Haskin, p. 140.
- 60 Annual Report (1915), p. 512.
- 61 <u>Background Documents Relating to the Panama</u>
 <u>Canal</u>. Prepared by the Congressional Research Service,
 Library of Congress. 95th Congress, 1st Session.
 Washington, D.C.: U.S. Government Printing Office,
 1977, p. 1024.
- 62 "Military Reservations: Canal Zone," p. 33.
- 63 Land Holdings (1970), p. 1.
- 64 <u>Annual Report of the Governor of the Panama Canal</u> for the Fiscal Year Ending June 30, 1920. Washington D.C.: Government Printing Office, 1920, p. 53.
- 65 <u>Canal Record, Volume XXII</u>. Balboa Heights, Canal Zone: The Panama Canal, 1929, p. 384.
- 66 Land Holdings (1970), p. 2.
- 67 <u>Land Holdings of the Armed Forces in the Canal</u>
 <u>Zone</u>. Published by the Panama Area Joint Committee,
 Headquarters Caribbean Command, Quarry Heights,
 Canal Zone. 1 July 1956, p. 9.
- 68 <u>Background Documents Relating to the Panama</u> <u>Canal</u>, p. 954.
- 69 De Mena, Dolores, compiler. "Raid Prompts Japanese Retaliation." <u>The Tropic Times</u>. May 8, 1992 p. 8. 76 Scanlan, p. 352.
- 70 Scanlan, p. 352.
- 71 Letter of the Secretary of War (1904), p. 86.
- 72 Annual Report (1915), p. 264.

- 73 Annual Report (1917), p. 309.
- 74 Annual Report of the Governor of the Panama Canal for the Fiscal Year Ended June 30, 1919. Washington D.C.: Government Printing Office, 1919, p. 303.
- 75 Annual Report of the Governor of the Panama Canal for the Fiscal Year Ended June 30, 1916. Washington D.C.: Government Printing Office, 1916, p. 11.
- 76 Annual Report (1917), p. 303.
- 77 Ibid.
- 78 Annual Report of the Governor of the Panama Canal for the Fiscal Year Ending June 30, 1931. Washington D.C.: Government Printing Office, 1931. p. 79.
- 79 De Mena, Dolores. "Clayton Hospital Advanced Medicine." <u>The Tropic Times</u>. January 14, 1994, p. 9.
- 80 Ibid, p. 9.
- 81 Ibid, p. 9.
- 82 Haskin, p. 140-141.
- 83 McDonald, Paul, Jr., ed. <u>Schooling in the Panama Canal Zone 1904 1979</u>. Panama City, Republic of Panama: Poligrafica S.A., 1990, p. 27.
- 84 Ibid, p. vii.
- 85 Ibid, p. 62.
- 86 Annual Report of the Governor of the Panama Canal for the Fiscal Year Ended June 30, 1921. Washington D.C.: Government Printing Office, 1921, p. 49.
- 87 McDonald, p. 32.
- 88 Ibid, p. 7.
- 89 Ibid, p. 28.

- 90 Ibid, p. 9.
- 91 Ibid, p. 45.
- 92 Ibid, p. 52.
- 93 Ibid, p. 65.
- 94 Annual Report of the Governor of the Panama Canal for the Fiscal Year Ended June 30, 1935. Washington D.C.: Government Printing Office, 1935, p. 127.
- 95 McDonald, p. 43-44.
- 96 "Historic Resources Assessments" [Draft], p. 21.

page 86

Bibliography

Abbot, Willis J. <u>Panama and the Canal in Picture and Prose</u>. New York: Syndicate Publishing Company, 1913.

Acquisition of Land in the Panama Canal Zone: History of World War II. U.S. Adjutant-General's Office, circa 1946 - 1950.

Actas del V Simposium Nacional de Antropologia, Arqueologia y Etnohistoria de Panama. Instituto Nacional de Cultura, 1978.

"Actuary's Data File: Austin Willard Lord." Avery Architectural and Fine Arts Library, Columbia University, New York, N.Y.

<u>Annual Historical Supplement FY82</u>. 193rd Infantry Brigade (Panama), 1982.

<u>Annual Report of the Isthmian Canal Commission</u>. (1905 - 1909) Washington, D.C.: Government Printing Office.

Annual Report of the Governor of the Panama Canal. (1915 - 1935) Washington, D.C.: Government Printing Office.

Background Documents Relating to the Panama Canal. Prepared by the Congressional Research Service, Library of Congress; prepared for the Committee on Foreign Relations, United States Senate (95th Congress, 1st Session). Washington, D.C.: U.S. Government Printing Office, 1977.

Bennett, Ira E. <u>History of the Panama Canal: Its</u> <u>Construction and Builders</u>. Washington, D.C.: Historical Publishing Company, 1915.

Bishop, Joseph Bucklin. <u>The Panama Gateway</u>. New York: Charles Scribner's Sons, 1915.

Brandon, Dorothy. <u>Mamie Doud Eisenhower: a Portrait of a First Lady</u>. New York: Charles Scribner's Sons, 1954.

<u>Canal Record</u>. (Volumes I - II) Ancon, Canal Zone: Isthmian Canal Commission Printing Office.

<u>Canal Record</u>. (Volumes VIII - XXII) Balboa Heights, Canal Zone: The Panama Canal. Castillero R., Ernesto J. <u>Raices de la Independencia de Panama</u>. Panama City, Republic of Panama: Talleres de la Impresora de la Nacion, 1978.

Core, Susie Pearl. <u>Trails of Progress or The Story of Panama and Its Canal</u>. New York: The Knickerbocker Press, 1925.

Davies, Howell, ed. <u>The South American Handbook</u>. London, England: Trade and Travel Publications, Ltd., 1966.

De Mena, Dolores. "Clayton Hospital Advanced Medicine." The Tropic Times. January 14, 1994.

De Mena, Dolores. "Kobbe Cannons Guard Atlantic." The Tropic Times. May 8, 1992.

De Mena, Dolores, compiler. "Raid Prompts Japanese Retaliation." <u>The Tropic Times</u>. May 8, 1992.

Edwards, Albert. <u>Panama: The Canal, the Country, and the People</u>. New York: The MacMillan Company, 1912.

English, Peter. <u>Panama and the Canal Zone in Pictures</u>. New York: Sterling Publishing Co., Inc., 1975.

Executive Orders Relating to the Panama Canal (March 8, 1904, to December 31, 1921). Mount Hope, Canal Zone: The Panama Canal Press, 1921.

Ferrell, Robert H., ed. <u>The Eisenhower Diaries</u>. New York: W.W. Norton & Company, 1981.

"Fort Amador (Includes Fort Grant), Panama Canal one: Master Plan Analysis of Existing Facilities". Regn, Col. Elmer M., compiler for the USARSO Command Review Board, March, 1972.

Bibliograhpy page 87

"Fort Clayton, Canal Zone: Master Plan Analysis of Existing Facilities". Regn, Col. Elmer M., compiler for the USARSO Command Review Board, March, 1972.

Harp, Susan. "Chief Engineer Directed Canal Project to its Conclusion." <u>The Panama Canal Spillway</u>, Volume XXXII, Number 6, March 25, 1994. Balboa Heights, Republic of Panama.

Harris, Jack C. <u>Dwight D. Eisenhower: A Great American Hero</u>. Racine, Wisconsin: Western Publishing Company, 1990.

Haskin, Frederic J. <u>The Panama Canal</u>. Garden City, New York: Doubleday, Page & Company, 1913.

"Historic Resources Assessments for Treaty Related Activities, Panama, C.A." [Draft] Prepared by Environmental Resources Planning Section, Mobile District Corps of Engineers, July, 1993.

"History of the Military Post of Quarry Heights."
Balboa, Canal Zone: Isthmian Historical Society, [no date].

"Impact of the Panama Canal Treaty on the United States Military in the Panama Canal Area." 193rd Infantry Brigade, Public Affairs Office, Public Information Paper, no date.

"John F. Stevens." <u>Panama Canal Review</u>, Fall 1972. Panama Canal Company: La Boca, Panama Canal Zone, 1972.

Keller, Ulrich. <u>The Building of the Panama Canal in Historic Photographs</u>. New York: Dover Publications, Inc., 1983.

Kilbey, C.W. <u>Panama Potpourri</u>. New York: Vantage Press, 1968.

LaFeber, Walter. <u>The Panama Canal: The Crisis in Historical Perspective</u>. New York: Oxford University Press, 1978.

Land Holdings of the Armed Forces in the Canal Zone. Published by the Panama Area Joint Committee, Headquarters Caribbean Command, Quarry Heights, Canal Zone, 1 July, 1956.

Land Holdings of the Armed Forces and the Federal Aviation Agency in the Canal Zone. Published jointly by HQ USARSO, HQ USAFSO, and HQ USNAVSO, 1 September, 1970.

Laval, Jerome D. <u>Images of an Age: Panama and the Building of the Canal</u>. Fresno, California: Graphic Technology Co., 1978.

Lee, W. Storrs. <u>The Strength to Move a Mountain</u>. New York: G.P. Putnam's Sons, 1958.

Len-Rios, Janet. "History of C.Z. Hospitals: A Chronology of Change." <u>The Panama Canal Review</u>. October 1, 1979.

Letter of the Secretary of War, Transmitting the First Annual Report of the Isthmian Canal Commission. Washington, D.C.: Government Printing Office, 1904.

Lindsey, Claude, compiler. <u>Index to the Reports of the Chief of Engineers</u>, U.S. Army, 1913 - 1917. Washington, D.C.: Government Printing Office, 1921.

Lyon, Peter. <u>Eisenhower: Portrait of the Hero</u>. Boston: Little, Brown and Company, 1974.

"Many Hope Graves Get Moved." <u>SCNews</u>, August 17, 1979.

"Marine's Headstone Marker, Dated 1863, Found in Balboa." Newspaper article, source unknown. Panama Canal Commission Technical Resources Center, Balboa, Republic of Panama.

Bibliograhpy page 88

Master Plan Building Information Schedule: Fort Amador, Panama Canal Zone (Includes Fort Grant). DA FORM 2368-R. April, 1973.

Master Plan Building Information Schedule: Fort Amador, Panama. Directorate of Facilities Engineering, 193rd Infantry Brigade (Panama). DA FORM 2368-R. April, 1973.

McCullough, David. <u>The Path Between the Seas.</u> New York: Simon and Schuster, 1977.

McDonald, MSgt. John W. "Out of the Swamp and Jungle - A History of Albrook AFB." <u>Caribbean Breeze</u>, October 15, 1954.

McDonald, Paul, Jr., ed. <u>Schooling in the Panama</u> <u>Canal Zone 1904 -1979</u>. Panama City, Republic of Panama: Poligrafica S.A., 1990.

"Military Reservations: Canal Zone." U.S. War Department, 1942.

"Monument Will Be Dedicated Honoring Col. John Webber." <u>Southern Command News</u>. June 21, 1968.

Morrow, Jay J. "A Great Flood in the Panama Canal." The Military Engineer. (Volume XVI, Number 86, March-April 1924.) [Publication information unavailable.]

Myke, compiler. <u>Panama! as a matter of fact...</u> Panama City, Republic of Panama: Poligrafica S.A., 1986.

Nicol, John and Francis X. Holbrook. "Naval Operations in the Panama Revolution 1903." <u>The American Neptune</u>, Volume 37, Number 4, October, 1977.

Nicolay, Helen. <u>The Bridge of Water: The Story of Panama and the Canal</u>. New York: D. Appleton-Century Company, Inc., 1940.

Organization and Functions: Panama Canal Company, Canal Zone Government. [No publishing information, May, 1956.]

Panama: Sovereignty for a Land Divided. Washington, D.C.: Epica Task Force, 1976.

Pierce, Philip N., and Frank O. Hough. <u>The Compact History of the United States Marine Corps.</u> New York: Hawthorn Books, Inc., 1964.

"Population Reports Fiscal Year 1963." File maintained by the Plans and Property Branch, Engineering Division, Directorate of Engineering and Housing - Panama, Corozal, Republic of Panama.

"Proposed Five Year Modernization and Rehabilitation Program for Barracks and Messing Facilities to Meet Volar and MCA Standards." Prepared by Kemp, Bunch and Jackson, Architects, Inc. (Jacksonville, Florida); Administered by Army Engineer District, Mobile Corps of Engineers, Mobile, Alabama; for USARSO, Canal Zone, Panama. 15 March 1972.

"Reservations - Military - Naval: Descriptions and Executive Orders." File copies of Executive Orders, maintained by the Plans and Property Branch, Engineering Division, Directorate of Engineering and Housing-Panama, Corozal, Republic of Panama, [no date.]

Senate Document Number 146: Message from the President of the United States Transmitting a Report by the Commission of Fine Arts in Relation to the Artistic Structure of The Panama Canal. Washington, D.C.: Government Printing Office, 1913.

Scanlan, Tom, assistant editor. <u>Army Times Guide to Army Posts</u>. Harrisburg, Pennsylvania: The Stackpole Company, 1966.

Small, Charles S. "Military Railroads of the Panama Canal Zone." Cos Cob, Connecticut, 1982.

Speller, Jon P. <u>The Panama Canal: Heart of America's Security</u>. New York: Robert Speller & Sons, Publishers, Inc., 1972.

St. George, Judith. <u>Panama Canal: Gateway to the World</u>. New York: G.P. Putnam's Sons, 1989.

Sullivan, Charles J., compiler. <u>Army Posts & Towns:</u> The Baedeker of the Army. Plattsburg Barracks, N.Y.: Burlington Free Press Printing Company, 1926.

"Survey Report for Consolidation of Real Property Maintenance Activities at Military Installations for the Panama Canal Zone." Regn, Col. Elmer M., compiler for the USARSO Defense Real Property Maintenance Activities Consolidation Committee for Panama Canal Zone, in compliance with directions from the Deputy Assistant Secretary of Defense (Installations and Housing), June, 1973.

Temple, Wayne C. <u>By Square and Compasses: The Building of Lincoln's Home and Its Saga</u>. Bloomington, Illinois: The Ashlar Press, 1984.

<u>Transactions of the International Engineering Congress, 1915</u>. San Francisco: Neal Publishing Company, 1916.

"United States Air Force Fact Sheet: First Lieutenant Frank P. Albrook." HQ USAF SOUTHERN AIR DIVISION (TAC), Office of Public Affairs, January, 1985.

"United States Air Force Fact Sheet: Major Charles Harold Howard." HQ USAF SOUTHERN AIR DIVISION (TAC), Office of Public Affairs, January, 1985.

"U.S. Army South." Office of Public Affairs, USARSO Public Affairs Office, October, 1989.

"U.S. Naval Complex Panama Canal Draft Master Plan." Naval Facilities Engineering Command, Atlantic Division, Norfolk, Virginia. 9 October, 1986.

USARSO Pam 870-1. "The Fortifications of the Panama Canal, Part I: The Defenses of the Panama Canal." United States Army South, Republic of Panama, 1 May, 1973.

Various fact sheets. Office of the USARSO Historian, Fort Clayton, Republic of Panama.

Wesley, 1LT Gonzales A. "1915-1994, Signal Soldiers, Families Celebrate 79 Years in Panama." <u>The IMA Bulletin</u>. (Volume V, Number 2, April 1994.) Fort Clayton, Republic of Panama: DCSIM Printing and Publications Management Office, 1994.

Many individuals and agencies provided assistance in producing this brochure, including Lieutenant Colonel John T. Lovo, Director of Engineering and Housing-Panama; Dolores De Mena, Historian, United States Army South; Robert C. Sullivan, Historian, 24th Wing; Pablo A. Epifanio M., Heriberto del C. Estribe CH., and Alfredo E. Martineau J., Plans and Property Branch, Directorate of Engineering and Housing-Panama; and the Panama Canal Commission Technical Resources Center.

Photographs

Photograph Legend

Photographs supplied by:

[AF] - Courtesy Office of the Historian, 24th Wing, U.S. Air Force

[DEH] - Directorate of Engineering & Housing

[G+K] - Graves + Klein, Architets, Engineers

[PCC] - Photo located at Panama Canal Commission, supplied by the U.S. National Archives

"Four U.S. Air Force A-37s make a formation pass over the Miraflores Locks" [AF]

"Monument at Quarry Heights" [G+K]

"Barracks at Fort Clayton" [G+K]

"Theater at Corozal" [G+K]

"Corozal American Cemetery" [G+K]

"Las Cruces Trail" [PCC - Vol 9, #846]

"Fort San Lorenzo" [G+K]

"Fort San Lorenzo today" [G+K]

"The Panama Railroad" [PCC - Vol 23, #2200]

"French Cemetery, Paraiso" [DEH]

"Count Ferdinand de Lesseps and Friends at Cristobal" [PCC - Vol 23, #2204] [Courtesy of Tracey Robinson]

"Remaining section of the French Canal" [G+K]

"The Pacific Squadron Visits Panama, 1909" [PCC - Vol 13, #1287]

"Panama City today" [G+K]

"President Carter and General Torrijos" [Courtesy of Jimmy Carter Library]

"Cargo ship in Miraflores Locks" [G+K]

"John F. Wallace" [Courtesy of Panama Canal Commission]

"John F. Stevens" [PCC - Vol 22, #2106]

"Chief Engineer Goethals in Front of the Miraflores Spillway" [PCC- Vol 21, #2071]

"Colonel George Washington Goethals and the [Third] Isthmian Canal Commission Board Members" [PCC - Vol 17, #1633]

"President Theodore Roosevelt inspecting the Canal Works" [PCC]

"Goethals Memorial Celebration" <u>Living and working</u> in the Canal Zone, Sept. 1954. The Panama Canal Company

"Doctor William C. Gorgas" [PCC - Vol 3, #214]

"Tourists in the Culebra Cut" -[Photo by Underwood and Underwood from Panama and the Canal, Willis Abbot, Syndicate Publiching Co., 1913]

"The U.S.S. Arizona Transits the Canal, February 23, 1921" [PCC - Vol 10, #952]

"French Housing, Ancon" [PCC - Vol 15, #1491]

"Screened Veranda at Quarry Heights" [DEH]

"Raised structure with metal flashing serves as a termite shield" [G+K]

"Residential Community at Fort Clayton" [G+K]

"Typical Tile Hood and Media Agua" [G+K]

"Oversized Bronze Doors to Building 519, Ft. Clayton" [G+K]

"Landscape at Ft. Amador" [G+K]

"Typical residential street with original lamp post" [G+K]

"Two 'Cabaret Girls' at the Fort Amador Beach Club"
[DEH]

"Boy Scouts of America Headquarters" [G+K]

"Deep sea fishing - Pacific Ocean" [Photograph courtesy of Georgia Carlos].

"Baseball Teams of the Panama Canal Zone" [PCC - Vol 14, #1338]

"Former Canal Zone Y.M.C.A." [G+K]

"The Annual 'Ocean to Ocean' Cayuca Race, Sponsored by the Explorer Scouts" [Photograph Courtesy of Rick Szymanski]

"Guns guarding Canal Entrance" [Photo by Underwood and Underwood from Panama and the Canal, Willis Abbot, Syndicate Publiching Co., 1913]

"Map of the Panama Canal Zone" [G+K]

"Battery Morgan, 1939" [USARSO Pam 870-1.]

"Newly Sited Housing" [G+K]

"Moving Buildings by Flatcar" [PCC - Vol 15, #1446]

"Pacific Division Map" [G+K]

LOGO: United States Southern Command (USSOUTHCOM)

"Quarry Heights Map" [G+K]

"Wood Frame Building at Quarry Heights" [G+K]

"Quarry Heights from Hydrographer's Tower" [DEH]

"Ancon Quarry" [PCC - Vol 14, #1348]

"Interior of Officer's Quarters Showing Wooden Stairway" [G+K]

"Residential Quarters at Quarry Heights" [G+K]

"Fort Amador/Fort Grant Map" [G+K]

"Palm-lined Street and Command Staff Quarters with Band Stand at Foreground" [G+K]

"Headquarters U.S. Naval Station, Ft. Amador" [G+K]

"Residential Quarters, U.S. Naval Station - Fort Amador" [G+K]

"Fort Clayton Map" [G+K]

"Residential Quarters at Fort Clayton" [G+K]

"Corozal and the Panama Canal Town of Los Rios Map" [G+K]

"Engineering Compound, 1952" [DEH]

"Former Stable Entry Door" [G+K]

"Former Bachelor Housing at Curundu" [G+K]

"Curundu housing" [G+K]

"Albrook Air Force Station Map" [G+K]

"Hangers, Albrook Field, C.Z." [AF]

"View down residential street, Albrook Field, C.Z." [G+K]

"Fort Kobbe Map" [G+K]

"Former Battery at Fort Kobbe" [G+K]

"Residential Quarters, Fort Kobbe" [G+K]

"Residential Quarters, Fort Kobbe" [G+K]

"Howard Air Force Base Map" [G+K]

page 92

"Housing at Howard Air Force Base" [G+K]

"Officers' Club at Howard Air Force Base" [G+K]

"Theater at Howard Air Force Base" [G+K]

"U.S. Naval Station - Rodman Map" [G+K]

"Former Barracks" [G+K]

"Residential Quarters at Rodman" [G+K]

"Family housing at Farfan" [G+K]

"Family housing at Farfan" [G+K]

"Entry light/gate detail" [G+K]

"Administration Building" [G+K]

"Single Family Housing" [G+K]

"Cocoli Housing Community" [G+K]

"Multi-Family Housing at Cocoli" [G+K]

"Cocoli Housing Community" [DEH]

"Gas Station at Cocoli" [G+K]

"Atlantic Division Map" [G+K]

"Fort Sherman Map" [G+K]

"Battery Kilpatrick" [G+K]

"Ferry Slip at Fort Sherman" [DEH]

"Barracks at Fort Sherman" [DEH]

"Fort Sherman Post Theater" [G+K]

"Bachelor Quarters' at Toro Point" <u>Panama and the Canal</u>, Willis Abbot, Syndicate Publishing Co., 1913

"Fort Davis Map" [G+K]

"Camp Gatun" [PCC - Vol 18, #1778]

"Housing at Fort Davis" [G+K]

"Fort Davis" [DEH]

"Octagonal Theater at Fort Davis" [DEH]

"Fort Gulick Map" [G+K]

"Former U.S. School of the Americas" [G+K]

"Fort Gulick - circa 1978" [DEH]

"Coco Solo Submarine Base" [PCC - Vol 19, #1826]

"Former Administration Building" [G+K]

"Former Housing at Coco Solo" [G+K]

"Col. Goethals reviewing the Marines at Camp Elliott" [PCC - Vol 8, #789]

"Marine Post Camp Elliott" [Photo by Underwood and Under wood from Panama and the Canal, Willis Abbot, Syndicate Publishing Co.]

"Camp Gaillard, 1920" [PCC - Vol 16, #1552]

"US Marines and Bugle Corp at Camp Otis" [From Panama and the Building of the Canal, photographs from the Keystone-Mast Stereograph Collection, University of California, Riverside.]

"U.S. Marines Participate in an Isthmian Canal Commission Fourth of July Athletic Event, 1912"
[PCC - Vol 16, #1529]

"Housing at Fort DeLesseps" [DEH]

"Housing at Fort DeLesseps" [DEH]

"Fort DeLesseps Dock Facility" [DEH]

"Fort Randolph Map" [G+K]

"Fort Randolph Quarter Master Stables" [DEH]

"Fort Randolph Largo Remo Bunk House" [DEH]

"Fort Randolph RSO Office and Warehouse, May 1916" [DEH]

"Fort Randolph One-Family Lieutant's Quarters" [DEH]

"The first troops at France Field" [AF]

"The 'Spirit of St. Louis' piloted by Col. Charles A. Lindbergh circles France Field, January 23, 1928." [AF]

"Signing the Turn-over Agreement." [AF]

"Raising the Flag At Rio Hato" [AF]

"Cerro Tigre Barracks, June 1930" [DEH]

"Barracks at Cerro Pelado" [DEH]

"Igloo magazine at Cerro Pelado" [DEH]

"Hospital Gounds, French Hospital at Ancon" [PCC - Vol 15, #1487]

"Culebra Island Quarantine Station" Photo by Underwood and Underwood from Panama and the Canal, Willis Abbot, Syndicate Publishing Co., 1913

"Gorgas Hospital Map" [DEH]

"Gorgas Hospital - circa 1978" [DEH]

"Administration and Clinics Building - circa 1920"
[DEH]

"Covered Passageway, Gorgas Hospital" [G+K]

"Entrance to Mortuary Facility" [G+K]

"The Superintendent's Residence, Ancon Hospital - circa 1920" [PCC - Vol 15, #1518]

"The New Ancon Hospital - circa 1920" [PCC]

"Herrick Heights" [G+K]

"Herrick Heights Housing" [DEH]

"Former Corozal Insane Asylum Building" [PCC - Vol 15, #1419]

"Coco Solo Hospital Map" [G+K]

"Former Gulick Sector Hospital" [G+K]

"Army Sector Hospital #519, Fort Clayton" [G+K]

"Panama Canal School Sign, 1958" [DEH]

"Former Gamboa Elementary School" [G+K]

"Balboa High School" [G+K]

"Corundu Junior High School" [G+K]

"Courtyard - Balboa Elementary" [G+K]

"Balboa Elementary Schoolhouse" [PCC - Vol 22, #2128]

"Curndu Elementary School" [G+K]

"Fort Clayton Elementary School" [G+K]

"Howard Elementary School" [G+K]

"Fort Kobbe Elementary School" [G+K]

"PCC Football Team and Cheerleaders" [Courtesy of DODDS - Panama]

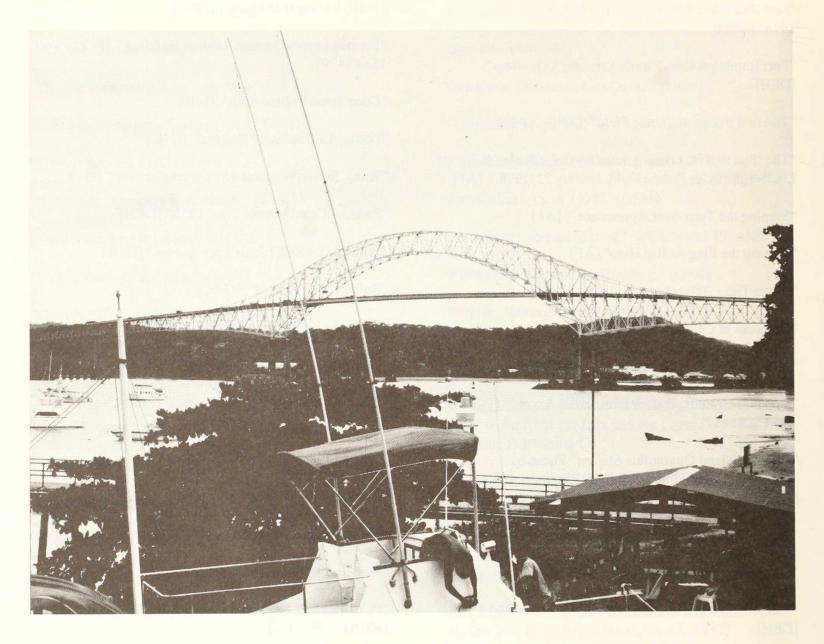
"Aerial View of First Cristobal High School" [PCC - Vol 2, #102

"New Cristobal High School" [G+K]

"Bridge of the Americas" [G+K]

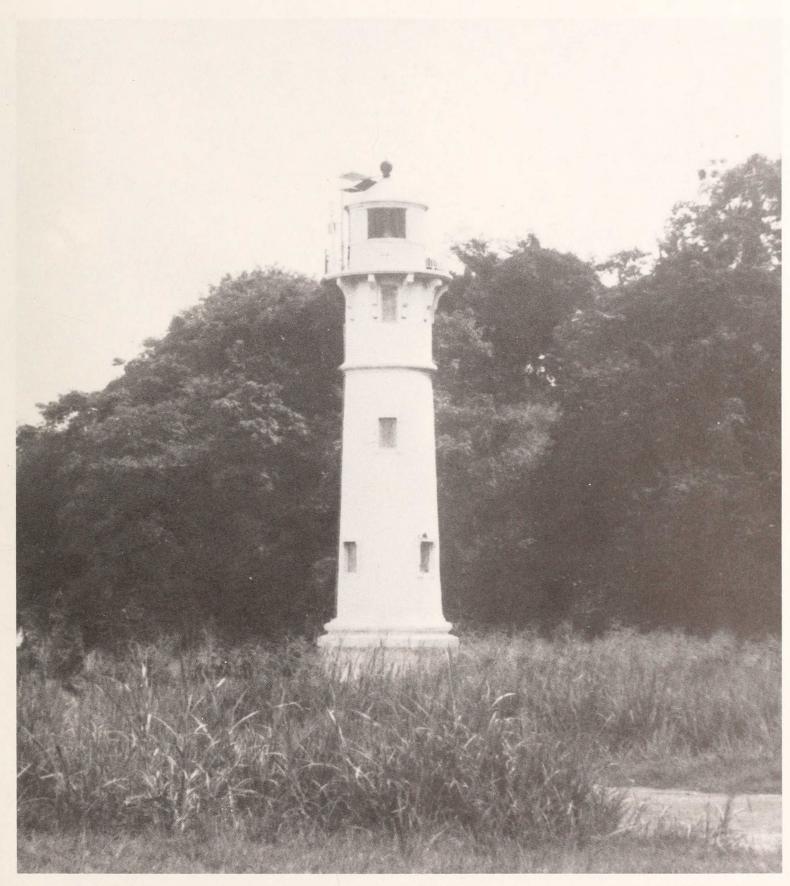
"Light House" [G+K]

Bridge of the Americas



Located on the Pacific side near the mouth of the Panama Canal, the Thatcher Ferry Bridge, more commonly referred to as the "Bridge of the Americas", opened on October 12, 1962. Constructed by the United States at an estimated cost

of \$20 million, the steel-arched bridge spans the Panama Canal and links North and South America. In the foreground, sport fishing boats are moored at the Balboa Yacht Club, a favorite watering hole for many locals.



Canal Light House



